


AEUG Fleming Solar, LLC
Kentucky State Board on Electric
Generation and Transmission Application

Application Documents
Site Assessment Report
Volume II
Case No. 2020-00206

November 2020



The logo for SWCA Environmental Consultants is positioned vertically on the left side of the page. It consists of the letters 'S', 'W', 'C', and 'A' stacked vertically in a large, light blue, serif font.

Fleming Solar Project: Site Assessment Report

NOVEMBER 2020

PREPARED FOR
AEUG Fleming Solar, LLC

PREPARED BY
SWCA Environmental Consultants

FLEMING SOLAR PROJECT: SITE ASSESSMENT REPORT

Prepared for
AEUG Fleming Solar, LLC
55 East Monroe Street, Suite 1925
Chicago, Illinois 60603
(312) 673-3000

Prepared by
SWCA Environmental Consultants
201 Chatham Street, Suite 3
Sanford, North Carolina 27330
(919) 292-2200
www.swca.com

SWCA Project No. 63271

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CONTENTS

1	Proposed Site Development Plan	1
2	Compatibility with Scenic Surroundings	2
3	Anticipated Noise Levels at Property Boundary	3
4	Effect on Road, Railways, and Fugitive Dust.....	4
5	Mitigation Measures.....	5
6	Literature Cited.....	7

Appendices

Appendix A.	Property Value Impact Report
Appendix B.	Legal Description of Site
Appendix C.	Noise and Traffic Study
Appendix D.	Environmental Site Assessment – Phase I
Appendix E.	Preliminary Site Layout
Appendix F.	Visual Assessment

Tables

Table 1.	Land Use Adjoining the Fleming Solar Project	1
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1 PROPOSED SITE DEVELOPMENT PLAN

REQUIREMENT: per KRS 278.708 (3)(a); A description of the proposed facility that shall include a proposed site development plan that describes:

- 1 Surrounding land uses for residential, commercial, agricultural, and recreational purposes;
- 2 The legal boundaries of the proposed site;
- 3 Proposed access control to the site;
- 4 The location of facility buildings, transmission lines, and other structures;
- 5 Location and use of access ways, internal roads, and railways;
- 6 Existing or proposed utilities to service the facility;
- 7 Compliance with applicable setback requirements as provided under KRS 278.7 04(2), (3), (4), or (5); and
- 8 Evaluation of the noise levels expected to be produced by the facility

COMPLIANCE: Please see the Application, Section 2 for a detailed description of the proposed Project and Project area. The following items provide information specifically in response to requirements 1 through 8 listed above.

- 1 A detailed description of surrounding land uses is provided in Appendix A: Property Value Impact Report (Kirkland Appraisals, LLC 2020). A summary of land use on parcels adjoining the Project is taken from this report and provided in Table 1 below.

Table 1. Land Use Adjoining the Fleming Solar Project

Land Use	Percent of Total Adjoining Acres	Percent of Total Adjoining Parcels
Residential	11.80	48.68
Agricultural	37.47	18.42
Agricultural/Residential	50.22	30.26
Religious	0.20	1.32
Commercial	0.30	1.32
Total	100.00	100.00

Source: Kirkland Appraisals, LLC (2020)

- 2 The Project survey boundary is depicted in Appendix A, and the legal descriptions of the participating properties are listed in Appendix B.
- 3 As described in the Application, Section 2, “AEUG Fleming Solar would secure the Project perimeter using six-foot-high chain-link fencing topped by barbed wire and meeting National Electrical Safety Code requirements. Project entrance gates are anticipated to be approximately 8 feet high and twelve feet wide to allow for emergency and maintenance access.”
- 4 The locations of proposed Project buildings, transmission lines, and other structures are depicted on the Preliminary Site Layout in Appendix E.
- 5 The locations of proposed access control points are depicted on the preliminary Site Layout in Appendix E. No railways are present within the proposed Project site. A railway is located just

west of the Project site but will not be used for the construction or operation of the proposed Project.

- 6 The locations of existing and proposed utilities to service the Project are depicted on Preliminary Site Layout in Appendix E.
- 7 The applicable setback requirements are identified in the Application, Attachment A: Map of Surrounding Residential Neighborhoods. AEUG Fleming Solar will seek a deviation from the setback requirements.
- 8 The noise and traffic study report provided in Appendix C identifies the noise levels expected to be produced by the facility. The findings of the report are as follows.

For noise generated by the operation of the Project, standard acoustical engineering methods were used and were based on vendor-supplied equipment noise levels, and results are shown in Table 2.4-2. These noise levels were based on inverters, trackers, and transformers specified in the preliminary design. Predicted levels at the closest sensitive receptor were calculated based on geometric spreading attenuation using International Organization for Standardization (ISO) 9613-2, *Acoustics – Sound Attenuation during Propagation Outdoors* (ISO 1996). Additional attenuation factors, such as noise-reducing intervening terrain, structures, and barriers cannot be considered with this methodology. Thus, this methodology is conservative. In addition, because solar panels produce power only when the sun is shining, the inverters and trackers will be silent at night. Furthermore, central inverters are usually surrounded on all sides by the solar panel arrays whose electricity they manage, which further distances them from anyone who might happen to be nearby and would potentially act as a noise buffer.

2 COMPATIBILITY WITH SCENIC SURROUNDINGS

REQUIREMENT: *per KRS 278.708 (3)(b); An evaluation of the compatibility of the facility with scenic surroundings.*

COMPLIANCE: See Appendix F for a Visual Assessment report written by Tetra Tech studying potential visual impacts to the community surrounding the proposed facility. The conclusion of the report, on page 6, reads as follows.

The proposed Project would introduce low vertical, geometric elements that are gray in color into a relatively rolling terrain landscape dominated by green vegetation and patches of trees and shrubs. Visual impacts would vary depending on several factors, such as the distance of the viewer from the Project and whether views toward the Project are unobstructed or screened by vegetation, terrain, or development. Viewers in proximity to the Project may have unobstructed or partially screened views and include adjacent rural residences and travelers along the local roads and highways. Existing vegetation between the solar arrays and the residences will be left in place, to the extent practicable, to help screen the Project and reduce visual impacts from the adjacent homes. It is anticipated that views of the Project from surrounding places (Nepton, Elizaville, Flemingsburg Junction, Flemingsburg) would generally be screened by vegetation and structures associated with development. Roadways and rural residential development located outside of built communities would have elevated views towards the Project. Views would vary from completely screened to partially screened to unobstructed. Portions of the Project that would be visible would be seen in the context of existing development and would appear as a co-dominant feature in the landscape setting.

REQUIREMENT: *per KRS 278.708 (3)(c); The potential changes in property values and land use resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the facility.*

COMPLIANCE: Please refer to the Property Value Impact Report provided as Appendix A (Kirkland Appraisals LLC 2020). In his transmittal letter, Mr. Kirkland provides the following conclusions.

The matched pair analysis shows no impact in home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all support a finding of no impact on property value.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial injury to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved adjoining agricultural uses, schools, churches, and residential developments.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting property. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is no traffic.

3 ANTICIPATED NOISE LEVELS AT PROPERTY BOUNDARY

REQUIREMENT: *per KRS 278.708 (3)(d); Evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary*

COMPLIANCE: See Appendix C for a report studying the anticipated peak and average noise levels associated with the facility construction and operation at the property boundary. The excerpt below is a brief summary found on page 9 of Appendix C. For the construction phase of the proposed Project, predictive noise modeling has considered the range of potential impacts likely noting that noise generating activities will progressively move across the site over the duration of construction. As such, the highest noise levels would not be expected to be experienced at a single receptor for more than one day while construction equipment (e.g. piling drill rig) is at the closest point to the receptor. At the closest receptor, the calculated noise level during construction is a maximum of 82.9 dBA.

For noise generated by the operation of the Project, standard acoustical engineering methods were used and were based on vendor-supplied equipment noise levels, and results are shown in Table 2.4-2. These noise levels were based on inverters, trackers, and transformers specified in the preliminary design. Predicted levels at the closest sensitive receptor were calculated based on geometric spreading attenuation using International Organization for Standardization (ISO) 9613-2, *Acoustics – Sound Attenuation during Propagation Outdoors* (ISO 1996). Additional attenuation factors, such as noise-reducing intervening terrain, structures, and barriers cannot be considered with this methodology. Thus, this methodology is conservative. In addition, because solar panels produce power only when the sun is shining, the trackers will be silent at night. It was assumed that reactive power will be produced at night; therefore, inverters, and

transformers were assumed to emit noise at the same levels as during daytime hours. Central inverters are usually surrounded on all sides by the solar panel arrays whose electricity they manage, which further distances them from anyone who might happen to be nearby and would potentially act as a noise buffer.

The "proposed" scenario day and night noise level (L_{dn}) at the nearest sensitive receptor, a residence on the north side of the Project 739 feet from the nearest inverter, is estimated to be 45.8 dBA L_{dn} , which is below the EPA's recommended 24-hour average day and night value of 55 dBA L_{dn} (EPA 1974).

The maximum worst-case scenario value, estimated under the assumption all pieces of equipment are operating simultaneously and that all the inverters are located at a minimum distance of 985 feet (300 meters) from any sensitive receptor, is below the EPA's recommended value, approximately 54.7 dBA L_{dn} . Therefore, the Project does comply with the EPA's recommendation.

The average sound level (L_{Aeq}) would be 9.9 dBA higher than the current estimated ambient noise levels for the area, which would be perceived by humans as approximately a doubling of sound level (Bies and Hansen 1988)).

4 EFFECT ON ROAD, RAILWAYS, AND FUGITIVE DUST

REQUIREMENT: *per KRS 278.708 (3)(e); The impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility*

COMPLIANCE: The report provided in Appendix C discusses the Project's impact on road and rail traffic, and the anticipated levels of fugitive dust created by the traffic and degradation of roads as a result of the Project. The following is a brief summary of Sections 3.4 and 4 of the report.

During construction of this facility, traffic is anticipated to increase, with morning and evening peaks for daily workers and deliveries being made to the site periodically. All necessary safety precautions, including use signage and flagmen, will be taken to best ensure collisions are prevented on the surrounding roads. There are not anticipated damages to the existing road infrastructure. Operation of the facility is not expected to cause a significant impact to local traffic as the expected traffic to be contributed to the area will be similar to that of a typical single-family home.

The proposed facility will only have minimal fugitive dust during construction. The facility will be constructed within the existing contours and topography of the land. For those limited areas that are cleared and grubbed, water trucks are anticipated be employed to keep dust to a minimum, authorized by Section 1.2 of the Kentucky Pollutant Discharge Elimination System (KPDES) as a non-stormwater discharge (KPDES 2018).

The earthmoving activities during the Civil Works phase required for the site are anticipated to last from October 2021 to May 2022. The total area disturbed is assumed to be approximately 397.5 acres, which is estimated as 25% of the total facility acres. It is estimated that over the course of construction there will be 11.94 tons of PM_{10} (particulate matter 10 microns or less in diameter) released and 1.19 tons of $PM_{2.5}$ (particulate matter 2.5 microns or less in diameter) released due to fugitive dust.

An existing railway is located on the western end of the Project that runs through Nepton, Kentucky. However, the Project will not use railways for any construction or operational activities. Therefore, the proposed solar facility will have no impacts on rail facilities as a result of Project construction or operation.

5 MITIGATION MEASURES

REQUIREMENT: per KRS 278.708(4): *The site assessment report shall also suggest any mitigating measures to be implemented by the applicant to minimize or avoid adverse effects identified in the site assessment report; and per KRS 278.708(6); The applicant shall be given the opportunity to present evidence to the board regarding any mitigation measures. As a condition of approval for an application to obtain a construction certificate, the board may require the implementation of any mitigation measures that the board deems appropriate.*

COMPLIANCE: Specific mitigation measures are listed below.

Existing vegetation between the solar arrays and the residences will be left in place, to the extent practicable, to help screen the Project and reduce visual impacts from the adjacent homes. It is anticipated that views of the Project from surrounding places (Nepton, Elizaville, Flemingsburg Junction, Flemingsburg) would generally be screened by vegetation and structures associated with development.

Other permit applications to the appropriate regulatory body will follow, as described below, as the Project enters the construction phase.

Stormwater Discharges Associated with Construction Activity

Regulatory Agency: Kentucky Energy & Environment Cabinet – Department for Environmental Protection – Division of Water (DOW)

The Project will obtain a Kentucky Department of Environmental Protection Stormwater Construction General Permit (Permit) from the Kentucky DOW for construction projects that disturb 1 or more acres of land in compliance with the National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act (CWA). The Kentucky Pollution Discharge Elimination System (KPDES) permit (KPDES No. KYR100000) is a General Permit for Stormwater Discharges Associated with Construction Activity.

Wetlands and Waters of the United States

Federal Regulatory Agency: United States Army Corps of Engineers – Louisville District

AEUG Fleming Solar has completed a Phase I environmental site assessment (Appendix D) for the Project. In the assessment, National Wetlands Inventory (NWI) wetlands categorized as riverine, freshwater pond, and freshwater emergent were identified on the Subject Property by the U.S. Fish and Wildlife Service wetland identification application. Therefore, an Approved Jurisdictional Determination (AJD) will be requested through the U.S. Army Corps of Engineers (USACE) – Louisville District. The AJD process will include the USACE Louisville District determining which aquatic features are considered federally jurisdictional under the CWA. If the Project design entails impacts to aquatic features, features that are deemed federally jurisdictional, a CWA Section 404 permit will be needed from the USACE.

The type of USACE permit required will depend on the amount of impact (e.g., acres or linear feet) to jurisdictional wetlands and/or waters of the U.S. If the proposed activity has minimal impacts, it may be

authorized under a Nationwide Permit. If Project impacts exceed threshold requirements of the Nationwide Permits, an Individual Permit may be necessary.

Kentucky Regulatory Agency: Kentucky Energy & Environment Cabinet – Department for Environmental Protection – DOW

Depending on Project impacts and type of Section 404 permit necessary (discussed above), a Section 401 Water Quality Certification may be needed. An applicant seeking a Section 401 Water Quality Certification must submit an Application for Permit to Construct Across or Along a Stream and/or Water Quality Certification to the DOW. The DOW reviews projects jointly for potential impacts to water and floodplains.

Projects proposing to minimally affect waters of the state may be authorized under General Certifications of USACE Nationwide Permits. General Certifications may include impact thresholds and specific conditions for the proposed activity. If the proposed activity qualifies for coverage under the Nationwide Permit and the corresponding General Certification, an applicant does not need anything from the DOW. An applicant can request a letter from the DOW that the project meets the requirements of a Nationwide Permit. An Individual Water Quality Certification is required if the activity does not qualify for General Certification.

6 LITERATURE CITED

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APPENDIX A
Property Value Impact Report



Kirkland Appraisals, LLC

Richard C. Kirkland, Jr., MAI
9408 Northfield Court
Raleigh, North Carolina 27603
Phone (919) 414-8142
rkirkland2@gmail.com
www.kirklandappraisals.com

September 21, 2020

Ms. April Montgomery
SWCA Environmental Consultants
201 Chatham Street, Suite 3
Sanford, NC 27330

RE: Fleming Solar Impact Study

Ms. Montgomery

At your request, I have considered the impact of a solar farm proposed to be constructed on a portion of a 2,350 acre assemblage of tracts on Nepton Road, Ewing, Kentucky. Specifically, I have been asked to give my professional opinion on whether the proposed solar farm will have any impact on adjoining property value and whether “the location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located.”

To form an opinion on these issues, I have researched and visited existing and proposed solar farms in Kentucky as well as other states, researched articles through the Appraisal Institute and other studies, and discussed the likely impact with other real estate professionals. I have not been asked to assign any value to any specific property.

This letter is a limited report of a real property appraisal consulting assignment and subject to the limiting conditions attached to this letter. My client is SWCA Environmental Consultants, represented to me by Ms. April Montgomery. My findings support the Kentucky Siting Board Application. The effective date of this consultation is September 21, 2020.

While based in NC, I am also a Kentucky State Certified General Appraiser #5522.

Conclusion

The matched pair analysis shows no impact in home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar farm is a compatible use for rural/residential transition areas and that it would function in a harmonious manner with this area.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial injury to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved adjoining agricultural uses, schools, churches, and residential developments. Industrial uses rarely absorb negative impacts from adjoining uses.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting property and that the proposed use is in harmony with the area in which it is located. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more

intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is minimal traffic.

If you have any further questions please call me any time.

Sincerely,



Richard C. Kirkland, Jr., MAI
Kentucky State Certified General Appraiser #5522

Standards and Methodology

I conducted this analysis using the standards and practices established by the the Appraisal Institute and that conform to the Uniform Standards of Professional Appraisal Practice. The analyses and methodologies contained in this report are accepted by all major lending institutions, and they are used in Kentucky and across the country as the industry standard by certified appraisers conducting appraisals, market analyses, or impact studies and are considered adequate to form an opinion of the impact of a land use on neighboring properties. These standards and practices have also been accepted by the courts at the trial and appellate levels and by federal courts throughout the country as adequate to reach conclusions about the likely impact a use will have on adjoining or abutting properties.

The aforementioned standards compare property uses in the same market and generally within the same calendar year so that fluctuating markets do not alter study results. Although these standards do not require a linear study that examines adjoining property values before and after a new use (e.g. a solar farm) is developed, some of these studies do in fact employ this type of analysis. Comparative studies, as used in this report, are considered an industry standard.

Determining what is an External Obsolescence

An external obsolescence is a use of property that, because of its characteristics, might have a negative impact on the value of adjacent or nearby properties because of identifiable impacts. Determining whether a use would be considered an external obsolescence requires a study that isolates that use, eliminates any other causing factors, and then studies the sales of nearby versus distant comparable properties. The presence of one or a combination of key factors does not mean the use will be an external obsolescence, but a combination of these factors tend to be present when market data reflects that a use is an external obsolescence.

External obsolescence is evaluated by appraisers based on several factors. These factors include but are not limited to:

- 1) Traffic. Solar Farms are not traffic generators.
- 2) Odor. Solar farms do not produce odor.
- 3) Noise. Solar farms generate no noise concerns and are silent at night.
- 4) Environmental. Solar farms do not produce toxic or hazardous waste. Grass is maintained underneath the panels so there is minimal impervious surface area.
- 5) Other factors. I have observed and studied many solar farms and have never observed any characteristic about such facilities that prevents or impedes neighbor from fully using their homes or farms or businesses for the use intended.

Proposed Use Description

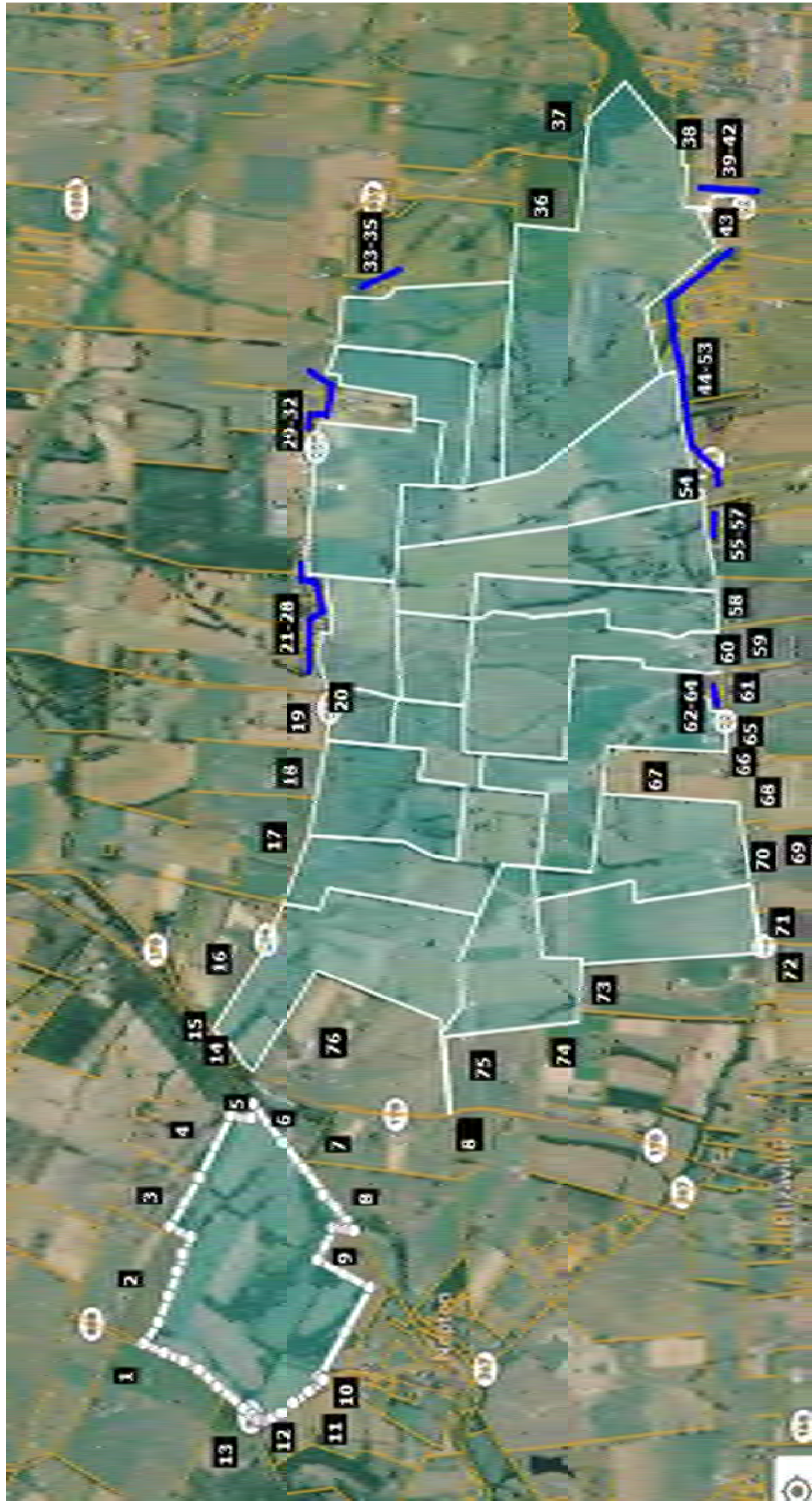
The proposed solar farm is proposed to be constructed on a portion of a 2,350 acre assemblage of tracts on Nepton Road, Ewing, Kentucky. Adjoining land is primarily a mix of residential and agricultural uses, which is very typical of solar farm sites. There is a nearby religious facility and minimal adjoining commercial uses. Religious facilities such as churches as well as schools are commonly located adjoining solar farms and I note that I have matched pair data included in this report for a solar farm located on land not only adjoining a religious facility, but actually located on the land owned by the church and leased out for the solar farm use.

Adjoining Properties

I have considered adjoining uses and included a map to identify each parcel's location. The closest adjoining home will be 175 feet from the closest panel and the average distance to adjoining homes will be 1,036 feet. Matched pair data presented later in this report shows no impact on home values as close as 105 feet when reasonable visual buffers are provided.

The breakdown of those uses by acreage and number of parcels is summarized below.

Adjoining Use Breakdown		
	Acreage	Parcels
Residential	11.80%	48.68%
Agricultural	37.47%	18.42%
Agri/Res	50.22%	30.26%
Religious	0.20%	1.32%
Commercial	0.30%	1.32%
Total	100.00%	100.00%



Surrounding Uses

#	MAP ID	Owner	GIS Data		Adjoin	Adjoin	Distance (ft)
			Acres	Present Use	Acres	Parcels	Home/Panel
1	16000000100	Seimens	127.40	Agri/Res	3.96%	1.32%	1,430
2	23000000200	Corwin	64.30	Agri/Res	2.00%	1.32%	785
3	23000000201	Corwin	26.50	Agricultural	0.82%	1.32%	N/A
4	23000000700	Lazy Oaks	197.60	Residential	6.14%	1.32%	N/A
5		Unknown	2.01	Residential	0.06%	1.32%	175
6		Unknown	19.83	Residential	0.62%	1.32%	325
7	23000001200	Earlywine	51.40	Agri/Res	1.60%	1.32%	2,100
8	23000001300	Williams	97.90	Agricultural	3.04%	1.32%	N/A
9	23000000100	McElfresh	26.10	Agri/Res	0.81%	1.32%	380
10	16800005900	McElfresh	0.70	Residential	0.02%	1.32%	N/A
11	16000000300	Ramey	35.50	Agri/Res	1.10%	1.32%	2,325
12	16000000301	Isaac	15.60	Residential	0.48%	1.32%	275
13	16000000200	Eicher	61.40	Agri/Res	1.91%	1.32%	1,365
14	23000001100	Fryman	3.20	Residential	0.10%	1.32%	N/A
15	23000000700	Lazy Oaks	32.50	Agri/Res	1.01%	1.32%	4,300
16	23000000600	Johnson	53.00	Agricultural	1.65%	1.32%	N/A
17	23000002300	Hargett	77.40	Agricultural	2.40%	1.32%	N/A
18	23000002301	Cooper	41.20	Agri/Res	1.28%	1.32%	820
19	23000002000	Carpenter	45.20	Agri/Res	1.40%	1.32%	360
20	23000002101	Perkins	1.30	Residential	0.04%	1.32%	225
21		Unknown	8.63	Residential	0.27%	1.32%	180
22	30000002400	Coyle	1.10	Residential	0.03%	1.32%	N/A
23	30000002201	Coyle	1.10	Residential	0.03%	1.32%	350
24	30000002204	Whisman	30.80	Agri/Res	0.96%	1.32%	465
25	30000002202	Lowe	10.20	Residential	0.32%	1.32%	255
26	30000002700	Jones	0.50	Residential	0.02%	1.32%	345
27	30000002100	Shank	140.10	Agri/Res	4.35%	1.32%	355
28		Unknown	0.50	Residential	0.02%	1.32%	360
29	30000001900	Hord	96.80	Agricultural	3.01%	1.32%	N/A
30	30000002000	Sgantas	1.50	Residential	0.05%	1.32%	1,070
31	30000003300	Masters	22.10	Agricultural	0.69%	1.32%	N/A
32	30000001700	Fleming Farms	322.10	Agri/Res	10.00%	1.32%	1,690
33	30000003800	Rayburn	4.20	Residential	0.13%	1.32%	1,050
34	30000003700	Harris	2.10	Residential	0.07%	1.32%	870
35	30000003900	Boling	87.00	Agricultural	2.70%	1.32%	N/A
36	30000004300	Hurd	27.90	Agri/Res	0.87%	1.32%	565
37	38000002303	Crain	329.50	Agricultural	10.23%	1.32%	N/A
38	31700001700	Fritz	3.30	Residential	0.10%	1.32%	N/A
39	31700002100	Atherton	7.10	Residential	0.22%	1.32%	910

#	MAP ID	Owner	GIS Data		Adjoin	Adjoin	Distance (ft)
			Acres	Present Use	Acres	Parcels	Home/Panel
40	31700000600	Case	1.30	Residential	0.04%	1.32%	940
41	31700000900	Moore	1.30	Residential	0.04%	1.32%	1,160
42	31700000300	Walton	18.00	Residential	0.56%	1.32%	N/A
43	31700002500	Flemingsburg E	6.50	Religious	0.20%	1.32%	960
44	31700000400	Horton	5.70	Residential	0.18%	1.32%	1,215
45	31700003800	Brown	1.00	Residential	0.03%	1.32%	N/A
46	31700002400	Brown	0.80	Residential	0.02%	1.32%	625
47	31700002300	Brown	1.00	Residential	0.03%	1.32%	650
48	31700003400	Mullholand	6.40	Residential	0.20%	1.32%	500
49	31700003500	Bryant	5.80	Residential	0.18%	1.32%	335
50	31000001000	Brown	36.50	Agricultural	1.13%	1.32%	N/A
51	31000000800	Suit	19.60	Residential	0.61%	1.32%	800
52	31000001600	James	213.50	Agricultural	6.63%	1.32%	N/A
53	31000000600	Cooper	21.20	Agri/Res	0.66%	1.32%	1,330
54		Unknown	1.46	Residential	0.05%	1.32%	1,150
55	31000000400	Dials	7.10	Residential	0.22%	1.32%	1,760
56	31000000300	Brown	89.50	Agri/Res	2.78%	1.32%	1,460
57		Unknown	1.81	Residential	0.06%	1.32%	1,580
58	31000000200	Lowe	40.40	Agri/Res	1.25%	1.32%	1,200
59	24000001201	Story	16.60	Residential	0.52%	1.32%	N/A
60		Unknown	9.64	Commercial	0.30%	1.32%	N/A
61	24000001200	Hills	75.40	Agri/Res	2.34%	1.32%	1,270
62	23000002601	Perkins	2.10	Residential	0.07%	1.32%	765
63	23000002602	Perkins	0.80	Residential	0.02%	1.32%	N/A
64		Unknown	1.29	Residential	0.04%	1.32%	970
65	24000001203	Doyle	26.80	Agricultural	0.83%	1.32%	N/A
66		Unknown	4.55	Residential	0.14%	1.32%	1,425
67	23000002800	Doyle	41.50	Agri/Res	1.29%	1.32%	720
68	24000001400	Clover	79.00	Agri/Res	2.45%	1.32%	2,235
69	24000000800	Fryman	37.90	Agricultural	1.18%	1.32%	N/A
70		Unknown	2.97	Residential	0.09%	1.32%	1,095
71	24000000700	Flutz	62.70	Agricultural	1.95%	1.32%	N/A
72	24000000500	Owens	20.40	Agri/Res	0.63%	1.32%	2,265
73	24000000600	Clark	69.00	Agri/Res	2.14%	1.32%	1,810
74	23000001605	Vice	38.80	Agricultural	1.21%	1.32%	N/A
75	23000001401	Vice	49.30	Agri/Res	1.53%	1.32%	1,180
76	23000001100	Fryman	125.30	Agri/Res	3.89%	1.32%	1,155
Total			3219.490		100.00%	100.00%	1,036

I. Summary of Solar Projects in Kentucky

I have researched the solar projects in Kentucky. I identified the solar farms through the Solar Energy Industries Association (SEIA) Major Projects List and then excluded the roof mounted facilities. This leaves only six solar farms in Kentucky for analysis at this time.

One of these six solar farms has limited analysis potential: E.W. Brown near Harrodsburg in Mercer County. The E. W. Brown 10 MW solar farm was built in 2014 and adjoins three coal-fired units. Given that research studies that I have previously read regarding fossil fuel power plants including “The Effect of Power Plants on Local Housing Values and Rents” by Lucas W. Davis and published May 2010, it would not be appropriate to use any data from this solar farm due to the influence of the coal fired power plant that could have an impact on up to a one-mile radius. I note that the closest home to a solar panel at this site is 565 feet and the average distance is 1,026 feet. The homes are primarily clustered at the Herrington Lake frontage. Again, no usable data can be derived from this solar farm due to the adjoining coal fired plant.

Furthermore, the Cooperative solar farm in Shelby County is a 0.5 MW facility on 35 acres built in 2020 that is proposed to eventually be 4 MW. This project is too new and there have been no home sales adjoining this facility. I also cannot determine how close the nearby homes are to the adjoining solar panels as the aerial imagery does not yet show these panels.

I have provided a summary of projects below and additional detailed information on the projects on the following pages. I specifically note the similarity in most of the sites in Kentucky as compared to most of the states that I have searched before in terms of mix of adjoining uses, topography, and distances to adjoining homes.

The number of solar farms currently in Kentucky is low compared to a number of other states and NC in particular. I have looked at solar farms in Kentucky for sales activity, but the small number of sites coupled with the relatively short period of time these solar farms have been in place has not provided as many examples of sales adjoining a solar farm as I am able to pull from other places. I have therefore also considered sales in other states, but I have shown in the summary how the demographics around the solar farms in other locations relate to the demographics around the proposed solar farm to show that generally similar locations are being considered. The similarity of the sites in terms of adjoining uses and surrounding demographics makes it reasonable to compare the lack of significant impacts in other areas would translate into a similar lack of significant impact at the subject site.

Parcel #	State	County	City	Name	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre			
										Res	Agri	Agri/Res	Com
610	KY	Warren	Bowling Green	Bowling Green	2	17.36	17.36	720	720	1%	64%	0%	36%
611	KY	Clarky	Winchester	Cooperative Solar I	8.5	181.47	63	2,110	2,040	0%	96%	3%	0%
612	KY	Kenton	Walton	Walton 2	2	58.03	58.03	891	120	21%	0%	60%	19%
613	KY	Grant	Crittenden	Crittenden	2.7	181.7	34.1	1,035	345	22%	27%	51%	0%
659	KY	Shelby	Simpsonville	Cooperative Shelby	4	35	35			6%	11%	32%	52%
660	KY	Mercer	Harrodsburg	E.W. Brown	10	50	50	1,026	565	3%	44%	29%	25%
Total Number of Solar Farms					6								
Average					4.87	87.3	42.9	1156	758	9%	40%	29%	22%
Median					3.35	54.0	42.5	1026	565	4%	36%	30%	22%
High					10.00	181.7	63.0	2110	2040	22%	96%	60%	52%
Low					2.00	17.4	17.4	720	120	0%	0%	0%	0%

610: Bowling Green Solar, Bowling Green, KY



This project was built in 2011 and located on 17.36 acres for a 2 MW project on Scotty's Way with the adjoining uses being primarily industrial. The closest dwelling is 720 feet from the nearest panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	0.58%	10.00%
Agricultural	63.89%	30.00%
Industrial	35.53%	60.00%
Total	100.00%	100.00%

611: Cooperative Solar I, Winchester, KY



This project was built in 2017 on 63 acres of a 181.47-acre parent tract for an 8.5 MW project with the closest home at 2,040 feet from the closest solar panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	0.15%	11.11%
Agricultural	96.46%	77.78%
Agri/Res	3.38%	11.11%
Total	100.00%	100.00%

612: Walton 2 Solar, Walton, KY



This project was built in 2017 on 58.03 acres for a 2 MW project with the closest home 120 feet from the closest panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	20.84%	47.06%
Agri/Res	59.92%	17.65%
Commercial	19.25%	35.29%
Total	100.00%	100.00%

613: Crittenden Solar, Crittenden, KY



This project was built in late 2017 on 34.10 acres out of a 181.70-acre tract for a 2.7 MW project where the closest home is 345 feet from the closest panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	1.65%	32.08%
Agricultural	73.39%	39.62%
Agri/Res	23.05%	11.32%
Commercial	0.64%	9.43%
Industrial	0.19%	3.77%
Airport	0.93%	1.89%
Substation	0.15%	1.89%
Total	100.00%	100.00%

659: Cooperative Shelby Solar, Simpsonville, KY



This project was built in 2020 on 35 acres for a 0.5 MW project that is approved for expansion up to 4 MW.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	6.04%	44.44%
Agricultural	10.64%	11.11%
Agri/Res	31.69%	33.33%
Institutional	51.62%	11.11%
Total	100.00%	100.00%

660: E.W. Brown Solar, Harrodsburg, KY



This project was built in 2016 on 50 acres for a 10 MW project. This solar facility adjoins three coal-fired units, which makes analysis of these nearby home sales problematic as it is impossible to extract the impact of the coal plant on the nearby homes especially given the lake frontage of the homes shown.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	2.77%	77.27%
Agricultural	43.92%	9.09%
Agri/Res	28.56%	9.09%
Industrial	24.75%	4.55%
Total	100.00%	100.00%

II. Market Analysis of the Impact on Value from Solar Farms

I have researched hundreds of solar farms in numerous states to determine the impact of these facilities on the value of adjoining property. This research has primarily been in North Carolina, but I have also conducted market impact analyses in Virginia, South Carolina, Tennessee, Texas, Oregon, Mississippi, Maryland, New York, California, Missouri, Florida, Montana, Georgia, Kentucky, and New Jersey.

Wherever I have looked at solar farms, I have derived a breakdown of the adjoining uses to show what adjoining uses are typical for solar farms and what uses would likely be considered consistent with a solar farm use similar to the breakdown that I've shown for the subject property on the previous page. A summary showing the results of compiling that data over hundreds of solar farms is shown later in the Scope of Research section of this report.

I also consider whether the properties adjoining a solar farm in one location have characteristics similar to the properties abutting or adjoining the proposed site so that I can make an assessment of market impact on each proposed site. Notably, in most cases solar farms are placed in areas very similar to the site in question, which is surrounded by low density residential and agricultural uses. In my over 650 studies, I have found a striking repetition of that same typical adjoining use mix in over 90% of the solar farms I have looked at. Matched pair results in multiple states are strikingly similar, and all indicate that solar farms – which generate very little traffic, and do not generate noise, dust or have other harmful effects – do not negatively impact the value of adjoining or abutting properties.

I have previously been asked by the Kentucky Siting Board about how the 37 solar farms and the 81 matched pair sets were chosen. This is the total of all the usable home and land sales adjoining the 650+ solar farms that I have looked at over the last 9 years. Most of the solar farms that I have looked at are only a few years old and have not been in place long enough for home or land sales to occur next to them for me to analyze. There is nothing unusual about this given the relatively rural locations of most of the solar farms where home and land sales occur much less frequently and the number of adjoining homes is relatively small.

Essentially, I go back through the solar farms that I have looked at roughly once a year to see if there are any new sales. If there is a sale I have to be sure it is not an inhouse sale or to a related family member. A great many of the rural sales that I find are from one family member to another, which makes analysis impossible given that these are not “arm’s length” transactions. There are also numerous examples of sales that are “arm’s length” but are still not usable due to other factors such as adjoining significant negative factors such as a coal fired plant or at a landfill or prison. I have looked at homes that require a driveway crossing a railroad spur, homes in close proximity to large industrial uses, as well as homes adjoining large state parks, or homes that are over 100 years old with multiple renovations. Such sales are not usable as they have multiple factors impacting the value that are tangled together. You can’t isolate the impact of the coal fired plant, the industrial building, or the railroad unless you are comparing that sale to a similar property with similar impacts. Matched pair analysis requires that you isolate properties that only have one differential to test for, which is why the type of sales noted above is not appropriate for analysis.

So once I go through all of the sales and eliminate the family transactions and those sales with multiple differentials, I am left with 81 matched pairs to analyze. The only other sales that I have eliminated from the analysis are home sales under \$100,000, which there haven’t been many such examples, but at that price range it is difficult to identify any impacts through matched pair analysis. As can be seen from a later question, I have not cherry picked the data to include just the sales that support one direction in value, but I have included all of them both positive and negative with a preponderance of the evidence supporting no impact to mild positive impacts.

A. *Kentucky Data*

1. Matched Pair – Crittenden Solar, Crittenden, KY



This solar farm was built in December 2017 on a 181.70-acre tract but utilizing only 34.10 acres. This is a 2.7 MW facility with residential subdivisions to the north and south.

I have identified four home sales to the north of this solar farm on Claiborne Drive and one home sale to the south on Eagle Ridge Drive since the completion of this solar farm. The home sale on Eagle Drive is for a \$75,000 home and all of the homes along that street are similar in size and price range. According to local broker Steve Glacken with Cutler Real Estate these are the lowest price range/style home in the market. I have not analyzed that sale as it would unlikely provide significant data to other homes in the area.

Mr. Glacken is currently selling lots at the west end of Claiborne for new home construction. He indicated that the solar farm near the entrance of the development has been a complete non-factor and none of the home sales are showing any concern over the solar farm. Most of the homes are in the \$250,000 to \$280,000 price range on lots being marketed for \$28,000 to \$29,000.

The first home considered is a bit of an anomaly for this subdivision in that it is the only manufactured home that was allowed in the community. It sold on January 3, 2019. I compared that sale to three other manufactured home sales in the area making minor adjustments as shown on the next page to account for the differences. After all other factors are considered the adjustments show a -1% to +13% impact due to the adjacency of the solar farm. The best indicator is 1250 Cason, which shows a 3% impact. A 3% impact is within the normal static of real estate transactions and therefore not considered indicative of a positive impact on the property, but it strongly supports an indication of no negative impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	250 Claiborne	0.96	1/3/2019	\$120,000	2000	2,016	\$59.52	3/2	Drive	Manuf	
	Not	1250 Cason	1.40	4/18/2018	\$95,000	1994	1,500	\$63.33	3/2	2-Det	Manuf	Carport
	Not	410 Reeves	1.02	11/27/2018	\$80,000	2000	1,456	\$54.95	3/2	Drive	Manuf	
	Not	315 N Fork	1.09	5/4/2019	\$107,000	1992	1,792	\$59.71	3/2	Drive	Manuf	

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	250 Claiborne								\$120,000			373
Not	1250 Cason	\$2,081		\$2,850	\$26,144		-\$5,000	-\$5,000	\$116,075	3%		
Not	410 Reeves	\$249		\$0	\$24,615				\$104,865	13%		
Not	315 N Fork	-\$1,091		\$4,280	\$10,700				\$120,889	-1%		

5%

I also looked at three other home sales on this street as shown below. These are stick-built homes and show a higher price range.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	300 Claiborne	1.08	9/20/2018	\$212,720	2003	1,568	\$135.66	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	\$229,000	2007	1,446	\$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	Ranch	Brick
	Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	300 Claiborne								\$213,000			488
Not	460 Claiborne	-\$2,026		-\$4,580	\$15,457	\$5,000			\$242,850	-14%		
Not	2160 Sherman	-\$5,672		-\$2,650	-\$20,406				\$236,272	-11%		
Not	215 Lexington	\$1,072		\$3,468	-\$2,559	-\$5,000			\$228,180	-7%		

-11%

This set of matched pairs shows a minor negative impact for this property. I was unable to confirm the sales price or conditions of this sale. The best indication of value is based on 215 Lexington, which required the least adjusting and supports a -7% impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	350 Claiborne	1.00	7/20/2018	\$245,000	2002	1,688	\$145.14	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	\$229,000	2007	1,446	\$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	350 Claiborne								\$245,000			720
Not	460 Claiborne	-\$3,223		-\$5,725	\$30,660	\$5,000			\$255,712	-4%		
Not	2160 Sherman	-\$7,057		-\$3,975	-\$5,743				\$248,225	-1%		
Not	215 Lexington	-\$136		\$2,312	\$11,400	-\$5,000			\$239,776	2%		

-1%

This set of matched pairs shows a no negative impact for this property. The range of adjusted impacts is -4% to +2%. The best indication is -1%, which as described above is within the typical market static and supports no impact on adjoining property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	370 Claiborne	1.06	8/22/2019	\$273,000	2005	1,570	\$173.89	4/3	2-Car	2-Story	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	2290 Dry	1.53	5/2/2019	\$239,400	1988	1,400	\$171.00	3/2.5	2-Car	R/FBsmt	Brick
	Not	125 Lexington	1.20	4/17/2018	\$240,000	2001	1,569	\$152.96	3/3	2-Car	Split	Brick

Adjustments										Avg		
Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
Adjoins	370 Claiborne								\$273,000			930
Not	2160 Sherman	\$1,831		\$0	-\$20,161				\$246,670	10%		
Not	2290 Dry	\$2,260		\$20,349	\$23,256	\$2,500			\$287,765	-5%		
Not	125 Lexington	\$9,951		\$4,800					\$254,751	7%		
											4%	

This set of matched pairs shows a general positive impact for this property. The range of adjusted impacts is -5% to +10%. The best indication is +7%. I typically consider measurements of +/-5% to be within the typical variation in real estate transactions. This indication is higher than that and suggests a positive relationship.

The four matched pairs considered in this analysis includes two that show no impact on value, one that shows a negative impact on value, and one that shows a positive impact. The negative indication supported by one matched pair is -7% and the positive impact of another is +7%. The two neutral indications show impacts of -1% and +3%. The average indicated impact is +1% when all four of these indicators are blended.

Furthermore, the comments of the local broker strongly support the data that shows no negative impact on value due to the proximity to the solar farm. This is further supported by the national data that is shown on the following pages.

B. National Data

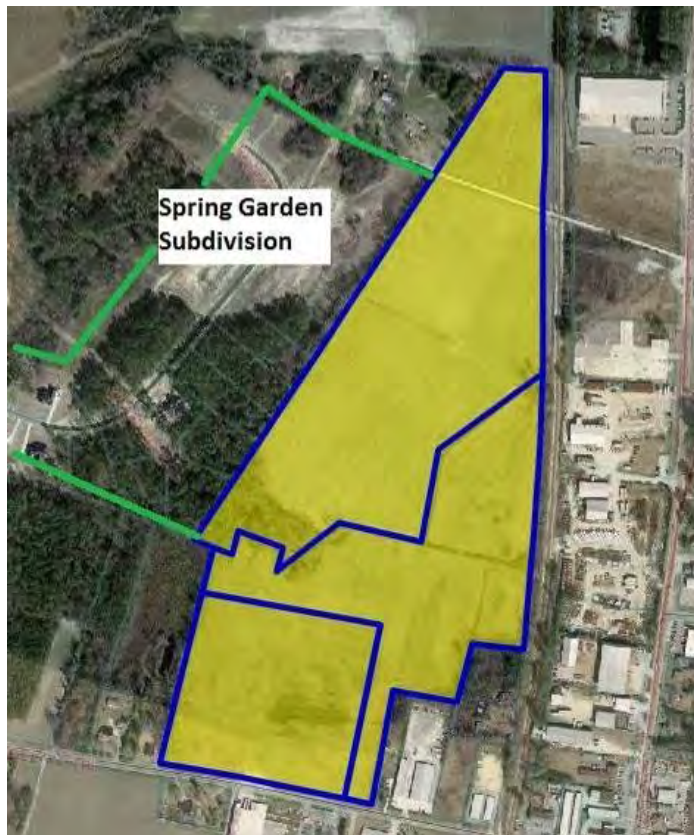
1. Matched Pair – AM Best Solar Farm, Goldsboro, NC

This solar farm adjoins Spring Garden Subdivision which had new homes and lots available for new construction during the approval and construction of the solar farm. The recent home sales have ranged from \$200,000 to \$250,000. This subdivision sold out the last homes in late 2014. The solar farm is clearly visible particularly along the north end of this street where there is only a thin line of trees separating the solar farm from the single-family homes.






Homes backing up to the solar farm are selling at the same price for the same floor plan as the homes that do not back up to the solar farm in this subdivision. According to the builder, the solar farm has been a complete non-factor. Not only do the sales show no difference in the price paid for the various homes adjoining the solar farm versus not adjoining the solar farm, but there are actually more recent sales along the solar farm than not. There is no impact on the sellout rate, or time to sell for the homes adjoining the solar farm.

I spoke with a number of owners who adjoin the solar farm and none of them expressed any concern over the solar farm impacting their property value.

The data presented on the following page shows multiple homes that have sold in 2013 and 2014 adjoining the solar farm at prices similar to those not along the solar farm. These series of sales indicate that the solar farm has no impact on the adjoining residential use.



The homes that were marketed at Spring Garden are shown below.

	<p>Americana SqFt: 3,194 Bed / Bath: 3 / 3.5</p>	<p>Price: \$237,900 View Now »</p>		<p>Washington SqFt: 3,292 Bed / Bath: 4 / 3.5</p>	<p>Price: \$244,900 View Now »</p>
	<p>Presidential SqFt: 3,400 Bed / Bath: 5 / 3.5</p>	<p>Price: \$247,900 View Now »</p>		<p>Kennedy SqFt: 3,494 Bed / Bath: 5 / 3</p>	<p>Price: \$249,900 View Now »</p>
	<p>Virginia SqFt: 3,449 Bed / Bath: 5 / 3</p>	<p>Price: \$259,900 View Now »</p>			

Matched Pairs

As of Date: 9/3/2014

Adjoining Sales After Solar Farm Completed

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600195570	Helm	0.76	Sep-13	\$250,000	2013	3,292	\$75.94	2 Story
3600195361	Leak	1.49	Sep-13	\$260,000	2013	3,652	\$71.19	2 Story
3600199891	McBrayer	2.24	Jul-14	\$250,000	2014	3,292	\$75.94	2 Story
3600198632	Foresman	1.13	Aug-14	\$253,000	2014	3,400	\$74.41	2 Story
3600196656	Hinson	0.75	Dec-13	\$255,000	2013	3,453	\$73.85	2 Story
	Average	1.27		\$253,600	2013.4	3,418	\$74.27	
	Median	1.13		\$253,000	2013	3,400	\$74.41	

Adjoining Sales After Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
0	Feddersen	1.56	Feb-13	\$247,000	2012	3,427	\$72.07	Ranch
0	Gentry	1.42	Apr-13	\$245,000	2013	3,400	\$72.06	2 Story
	Average	1.49		\$246,000	2012.5	3,414	\$72.07	
	Median	1.49		\$246,000	2012.5	3,414	\$72.07	

Adjoining Sales Before Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600183905	Carter	1.57	Dec-12	\$240,000	2012	3,347	\$71.71	1.5 Story
3600193097	Kelly	1.61	Sep-12	\$198,000	2012	2,532	\$78.20	2 Story
3600194189	Hadwan	1.55	Nov-12	\$240,000	2012	3,433	\$69.91	1.5 Story
	Average	1.59		\$219,000	2012	2,940	\$74.95	
	Median	1.59		\$219,000	2012	2,940	\$74.95	

Nearby Sales After Solar Farm Completed

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600193710	Barnes	1.12	Oct-13	\$248,000	2013	3,400	\$72.94	2 Story
3601105180	Nackley	0.95	Dec-13	\$253,000	2013	3,400	\$74.41	2 Story
3600192528	Mattheis	1.12	Oct-13	\$238,000	2013	3,194	\$74.51	2 Story
3600198928	Beckman	0.93	Mar-14	\$250,000	2014	3,292	\$75.94	2 Story
3600196965	Hough	0.81	Jun-14	\$224,000	2014	2,434	\$92.03	2 Story
3600193914	Preskitt	0.67	Jun-14	\$242,000	2014	2,825	\$85.66	2 Story
3600194813	Bordner	0.91	Apr-14	\$258,000	2014	3,511	\$73.48	2 Story
3601104147	Shaffer	0.73	Apr-14	\$255,000	2014	3,453	\$73.85	2 Story
	Average	0.91		\$246,000	2013.625	3,189	\$77.85	
	Median	0.92		\$249,000	2014	3,346	\$74.46	

Nearby Sales Before Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600191437	Thomas	1.12	Sep-12	\$225,000	2012	3,276	\$68.68	2 Story
3600087968	Lilley	1.15	Jan-13	\$238,000	2012	3,421	\$69.57	1.5 Story
3600087654	Burke	1.26	Sep-12	\$240,000	2012	3,543	\$67.74	2 Story
3600088796	Hobbs	0.73	Sep-12	\$228,000	2012	3,254	\$70.07	2 Story
	Average	1.07		\$232,750	2012	3,374	\$69.01	
	Median	1.14		\$233,000	2012	3,349	\$69.13	

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	Median	Average	Median
Sales Price	\$253,600	\$253,000	\$246,000	\$249,000
Year Built	2013	2013	2014	2014
Size	3,418	3,400	3,189	3,346
Price/SF	\$74.27	\$74.41	\$77.85	\$74.46

Percentage Differences

Median Price	-2%
Median Size	-2%
Median Price/SF	0%

I note that 2308 Granville Drive sold again in November 2015 for \$267,500, or \$7,500 more than when it was purchased new from the builder two years earlier (Tax ID 3600195361, Owner: Leak). The neighborhood is clearly showing appreciation for homes adjoining the solar farm.

The Median Price is the best indicator to follow in any analysis as it avoids outlying samples that would otherwise skew the results. The median sizes and median prices are all consistent throughout the sales both before and after the solar farm whether you look at sites adjoining or nearby to the solar farm. The average for the homes nearby the solar farm shows a smaller building size and a higher price per square foot. This reflects a common occurrence in real estate where the price per square foot goes up as the size goes down. This is similar to the discount you see in any market where there is a discount for buying larger volumes. So when you buy a 2 liter coke you pay less per ounce than if you buy a 16 oz. coke. So even comparing averages the indication is for no impact, but I rely on the median rates as the most reliable indication for any such analysis.

I have also considered four more recent resales of homes in this community as shown on the following page. These comparable sales adjoin the solar farm at distances ranging from 315 to 400 feet. The matched pairs show a range from -9% to +6%. The range of the average difference is -2% to +1% with an average of 0% and a median of +0.5%. These comparable sales support a finding of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	103 Granville Pl	1.42	7/27/2018	\$265,000	2013	3,292	\$80.50	4/3.5	2-Car	2-Story		385
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	103 Granville Pl								\$265,000		-2%	
	Not	2219 Granville	\$4,382		\$1,300	\$0				\$265,682	0%		
	Not	634 Friendly	-\$8,303		-\$6,675	\$16,721	-\$10,000			\$258,744	2%		
	Not	2403 Granville	-\$6,029		-\$1,325	\$31,356				\$289,001	-9%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	104 Erin	2.24	6/19/2017	\$280,000	2014	3,549	\$78.90	5/3.5	2-Car	2-Story		315
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	104 Erin								\$280,000		0%	
	Not	2219 Granville	-\$4,448		\$2,600	\$16,238				\$274,390	2%		
	Not	634 Friendly	-\$17,370		-\$5,340	\$34,702	-\$10,000			\$268,992	4%		
	Not	2403 Granville	-\$15,029		\$0	\$48,285				\$298,256	-7%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	2312 Granville	0.75	5/1/2018	\$284,900	2013	3,453	\$82.51	5/3.5	2-Car	2-Story		400
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	2312 Granville								\$284,900		1%	
	Not	2219 Granville	\$2,476		\$1,300	\$10,173				\$273,948	4%		
	Not	634 Friendly	-\$10,260		-\$6,675	\$27,986	-\$10,000			\$268,051	6%		
	Not	2403 Granville	-\$7,972		-\$1,325	\$47,956				\$303,659	-7%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	2310 Granville	0.76	5/14/2019	\$280,000	2013	3,292	\$85.05	5/3.5	2-Car	2-Story		400
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	2310 Granville								\$280,000		1%	
	Not	2219 Granville	\$10,758		\$1,300	\$0				\$272,058	3%		
	Not	634 Friendly	-\$1,755		-\$6,675	\$16,721	-\$10,000			\$265,291	5%		
	Not	2403 Granville	\$469		-\$1,325	\$31,356				\$295,500	-6%		

I have also considered the original sales prices in this subdivision relative to the recent resale values as shown in the chart below. This rate of appreciation is right at 2.5% over the last 6 years. Zillow indicates that the average home value within the 27530 zip code as of January 2014 was \$101,300 and as of January 2020 that average is \$118,100. This indicates an average increase in the market of 2.37%. I conclude that the appreciation of the homes adjoining the solar farm are not impacted by the presence of the solar farm based on this data.

Address	Initial Sale		Second Sale		Year Diff	Apprec. Apprec.	% Apprec.	Apprec. %/Year
	Date	Price	Date	Price				
1 103 Granville Pl	4/1/2013	\$245,000	7/27/2018	\$265,000	5.32	\$20,000	8.16%	1.53%
2 105 Erin	7/1/2014	\$250,000	6/19/2017	\$280,000	2.97	\$30,000	12.00%	4.04%
3 2312 Granville	12/1/2013	\$255,000	5/1/2015	\$262,000	1.41	\$7,000	2.75%	1.94%
4 2312 Granville	5/1/2015	\$262,000	5/1/2018	\$284,900	3.00	\$22,900	8.74%	2.91%
5 2310 Granville	8/1/2013	\$250,000	5/14/2019	\$280,000	5.79	\$30,000	12.00%	2.07%
6 2308 Granville	9/1/2013	\$260,000	11/12/2015	\$267,500	2.20	\$7,500	2.88%	1.31%
7 2304 Granville	9/1/2012	\$198,000	6/1/2017	\$225,000	4.75	\$27,000	13.64%	2.87%
8 102 Erin	8/1/2014	\$253,000	11/1/2016	\$270,000	2.25	\$17,000	6.72%	2.98%
							Average	2.46%
							Median	2.47%

2. Matched Pair – White Cross Solar Farm, Chapel Hill, NC



A new solar farm was built at 2159 White Cross Road in Chapel Hill, Orange County in 2013. After construction, the owner of the underlying land sold the balance of the tract not encumbered by the solar farm in July 2013 for \$265,000 for 47.20 acres, or \$5,606 per acre. This land adjoins the solar farm to the south and was clear cut of timber around 10 years ago. I compared this purchase to a nearby transfer of 59.09 acres of timber land just south along White Cross Road that sold in November 2010 for \$361,000, or \$6,109 per acre. After purchase, this land was divided into three mini farm tracts of 12 to 20 acres each. These rates are very similar and the difference in price per acre is attributed to the timber value and not any impact of the solar farm.

Type	TAX ID	Owner	Acres	Date	Price	\$/Acre	Notes	Conf By
Adjoins Solar	9748336770	Haggerty	47.20	Jul-13	\$265,000	\$5,614	Clear cut	Betty Cross, broker
Not Near Solar	9747184527	Purcell	59.09	Nov-10	\$361,000	\$6,109	Wooded	Dickie Andrews, broker

The difference in price is attributed to the trees on the older sale.

No impact noted for the adjacency to a solar farm according to the broker.

I looked at a number of other nearby land sales without proximity to a solar farm for this matched pair, but this land sale required the least allowance for differences in size, utility and location.

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	Median	Average	Median
Sales Price	\$5,614	\$5,614	\$6,109	\$6,109
Adjustment for Timber	\$500	\$500		
Adjusted	\$6,114	\$6,114	\$6,109	\$6,109
Tract Size	47.20	47.20	59.09	59.09

Percentage Differences

Median Price Per Acre 0%

This matched pair again supports the conclusion that adjacency to a solar farm has no impact on adjoining residential/agricultural land.

3. Matched Pair – Wagstaff Farm, Roxboro, NC



This solar farm is located at the northeast corner of a 594-acre farm with approximately 30 acres of solar farm area. This solar farm was approved and constructed in 2013.

After approval, 18.82 acres were sold out of the parent tract to an adjoining owner to the south. This sale was at a similar price to nearby land to the east that sold in the same time from for the same price per acre as shown below.

Type	TAX ID	Owner	Acres	Present Use	Date Sold	Price	\$/AC
Adjoins Solar	0918-17-11-7960	Piedmont	18.82	Agricultural	8/19/2013	\$164,000	\$8,714
Not Near Solar	0918-00-75-9812 et al	Blackwell	14.88	Agricultural	12/27/2013	\$130,000	\$8,739

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	Median	Average	Median
Sales Price	\$8,714	\$8,714	\$8,739	\$8,739
Tract Size	18.82	18.82	14.88	14.88

Percentage Differences

Median Price Per Acre 0%

This matched pair again supports the conclusion that adjacency to a solar farm has no impact on adjoining residential/agricultural land.

4. Matched Pair – Mulberry, Selmer, TN



This solar farm was built in 2014 on 208.89 acres with the closest home being 480 feet away.

This solar farm adjoins two subdivisions with Central Hills having a mix of existing and new construction homes. Lots in this development have been marketed for \$15,000 each with discounts offered for multiple lots being used for a single home site. I spoke with the agent with Rhonda Wheeler and Becky Hearnberger with United County Farm & Home Realty who noted that they have seen no impact on lot or home sales due to the solar farm in this community.

I have included a map below as well as data on recent sales activity on lots that adjoin the solar farm or are near the solar farm in this subdivision both before and after the announced plan for this solar farm facility. I note that using the same method I used to breakdown the adjoining uses at the subject property I show that the predominant adjoining uses are residential and agricultural, which is consistent with the location of most solar farms.

Adjoining Use Breakdown

	Acreage	Parcels
Commercial	3.40%	0.034
Residential	12.84%	79.31%
Agri/Res	10.39%	3.45%
Agricultural	73.37%	13.79%
Total	100.00%	100.00%

From the above map, I identified four recent sales of homes that occurred adjoining the solar farm both before and after the announcement of the solar farm. I have adjusted each of these for differences in size and age in order to compare these sales among themselves. As shown below after adjustment, the median value is \$130,776 and the sales prices are consistent with one outlier which is also the least comparable home considered. The close grouping and the similar price per point overall as well as the similar price per square foot both before and after the solar farm.

Matched Pairs

#	TAX ID	Owner	Date Sold	Sales Price	Acres	Built	GBA	\$/GBA	Style	Parking
6&7	0900 A 011.00	Henson	Jul-14	\$130,000	2.65	2007	1,511	\$86.04	1 Story	2 Garage
12	0900 A 003.00	Amerson	Aug-12	\$130,000	1.20	2011	1,586	\$81.97	1 Story	2 Garage
15	099C A 003.00	Smallwood	May-12	\$149,900	1.00	2002	1,596	\$93.92	1 Story	4 Garage
16	099C A 002.00	Hessing	Jun-15	\$130,000	1.00	1999	1,782	\$72.95	1 Story	2 Garage
		Average		\$134,975	1.46	2005	1,619	\$83.72		
		Median		\$130,000	1.10	2005	1,591	\$84.00		

#	TAX ID	Owner	Date Sold	Sales Price	Adjustments*					
					Acres	Built	GBA	Style	Parking	Total
6&7	0900 A 011.00	Henson	Jul-14	\$130,000	-\$7,500	\$2,600	\$6,453	\$0	\$0	\$131,553
12	0900 A 003.00	Amerson	Aug-12	\$130,000	\$0	\$0	\$0	\$0	\$0	\$130,000
15	099C A 003.00	Smallwood	May-12	\$149,900	\$0	\$6,746	-\$939	\$0	-\$15,000	\$140,706
16	099C A 002.00	Hessing	Jun-15	\$130,000	\$0	\$7,800	-\$14,299	\$0	\$0	\$123,501
		Average		\$134,975	-\$1,875	\$4,286	-\$2,196	\$0	-\$3,750	\$131,440
		Median		\$130,000	\$0	\$4,673	-\$470	\$0	\$0	\$130,776

* I adjusted all of the comparables to a base line 2011 Year Built and 1,586 s.f. based on Lot 12

I also considered a number of similar home sales nearby that were both before and after the solar farm was announced as shown below. These homes are generally newer in construction and include a number of larger homes but show a very similar price point per square foot.

Nearby Sales Before Solar Farm Announced

TAX ID	Owner	Date Sold	Sales Price	Acres	Built	GBA	\$/GBA	Style	Parking
099B A 019	Durrance	Sep-12	\$165,000	1.00	2012	2,079	\$79.37	1 Story	2 Garage
099B A 021	Berryman	Apr-12	\$212,000	2.73	2007	2,045	\$103.67	1 Story	2 Garage
0900 A 060	Nichols	Feb-13	\$165,000	1.03	2012	1,966	\$83.93	1 Story	2 Garage
		Average	\$180,667	1.59	2010	2,030	\$88.99		
		Median	\$165,000	1.03	2012	2,045	\$83.93		

Nearby Sales After Solar Farm Announced

TAX ID	Owner	Date Sold	Sales Price	Acres	Built	GBA	\$/GBA	Style	Parking
090N A 040	Carrithers	Mar-15	\$120,000	1.00	2010	1,626	\$73.80	1 Story	2 Garage
099C A 043	Cherry	Feb-15	\$148,900	2.34	2008	1,585	\$93.94	1 Story	2 Garage
		Average	\$134,450	1.67	2009	1,606	\$83.87		
		Median	\$134,450	1.67	2009	1,606	\$83.87		

I then adjusted these nearby sales using the same criteria as the adjoining sales to derive the following breakdown of adjusted values based on a 2011 year built 1,586 square foot home. The adjusted values are consistent with a median rate of \$128,665, which is actually lower than the values for the homes that back up to the solar farm.

Nearby Sales Adjusted				Adjustments*					
TAX ID	Owner	Date Sold	Sales Price	Acres	Built	GBA	Style	Parking	Total
099B A 019	Durrance	Sep-12	\$165,000	\$0	-\$825	-\$39,127	\$0	\$0	\$125,048
099B A 021	Berryman	Apr-12	\$212,000	-\$7,500	\$4,240	-\$47,583	\$0	\$0	\$161,157
090O A 060	Nichols	Feb-13	\$165,000	\$0	-\$825	-\$31,892	\$0	\$0	\$132,283
090N A 040	Carrithers	Mar-15	\$120,000	\$0	\$600	-\$2,952	\$0	\$0	\$117,648
099C A 043	Cherry	Feb-15	\$148,900	-\$7,500	\$2,234	\$94	\$0	\$0	\$143,727
	Average		\$165,500	-\$1,875	\$798	-\$30,389	\$0	\$0	\$134,034
	Median		\$165,000	\$0	-\$113	-\$35,510	\$0	\$0	\$128,665

* I adjusted all of the comparables to a base line 2011 Year Built and 1,586 s.f. based on Lot 12

If you consider just the 2015 nearby sales, the range is \$117,648 to \$143,727 with a median of \$130,688. If you consider the recent adjoining sales the range is \$123,501 to \$131,553 with a median of \$127,527.

This difference is less than 3% in the median and well below the standard deviation in the sales. The entire range of the adjoining sales prices is overlapped by the range from the nearby sales. These are consistent data sets and summarized below.

Matched Pair Summary

	Adjoins Solar Farm		Nearby After Solar Farm	
	Average	Median	Average	Median
Sales Price	\$134,975	\$130,000	\$134,450	\$134,450
Year Built	2005	2005	2009	2009
Size	1,619	1,591	1,606	1,606
Price/SF	\$83.72	\$84.00	\$83.87	\$83.87

Based on the data presented above, I find that the price per square foot for finished homes is not being impacted negatively by the announcement of the solar farm. The difference in pricing in homes in the neighborhood is accounted for by differences in size, building age, and lot size. The median price for a home after those factors are adjusted for are consistent throughout this subdivision and show no impact due to the proximity of the solar farm. This is consistent with the comments from the broker I spoke with for this subdivision as well.

I have also run a number of direct matched comparisons on the sales adjoining this solar farm as shown below. These direct matched pairs include some of those shown above as well as additional more recent sales in this community. In each of these I have compared the one sale adjoining the solar farm to multiple similar homes nearby that do not adjoin a solar farm to look for any potential impact from the solar farm.

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
3	Adjoins	491 Dusty	6.86	10/28/2016	\$176,000	2009	1,801	\$97.72	3/2	2-Gar	Ranch	
	Not	820 Lake Trail	1.00	6/8/2018	\$168,000	2013	1,869	\$89.89	4/2	2-Gar	Ranch	
	Not	262 Country	1.00	1/17/2018	\$145,000	2000	1,860	\$77.96	3/2	2-Gar	Ranch	
	Not	35 April	1.15	8/16/2016	\$185,000	2016	1,980	\$93.43	3/2	2-Gar	Ranch	

Adjoining Sales Adjusted												
Parcel	Solar	Address	Acres	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
3	Adjoins	491 Dusty								\$176,000		480
	Not	820 Lake Trail		-\$8,324	\$12,000	-\$3,360	-\$4,890			\$163,426	7%	
	Not	262 Country		-\$5,450	\$12,000	\$6,525	-\$3,680			\$154,396	12%	
	Not	35 April		\$1,138	\$12,000	-\$6,475	-\$13,380			\$178,283	-1%	
										Average	6%	

The best matched pair is 35 April Loop, which required the least adjustment and indicates a -1% increase in value due to the solar farm adjacency.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
12	Adjoins	57 Cooper	1.20	2/26/2019	\$163,000	2011	1,586	\$102.77	3/2	2-Gar	1.5 Story	Pool
	Not	191 Amelia	1.00	8/3/2018	\$132,000	2005	1,534	\$86.05	3/2	Drive	Ranch	
	Not	75 April	0.85	3/17/2017	\$134,000	2012	1,588	\$84.38	3/2	2-Crprt	Ranch	
	Not	345 Woodland	1.15	12/29/2016	\$131,000	2002	1,410	\$92.91	3/2	1-Gar	Ranch	

Adjoining Sales Adjusted												
Parcel	Solar	Address	Sales Price	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
12	Adjoins	57 Cooper	\$163,000							\$163,000		685
	Not	191 Amelia	\$132,000	\$2,303		\$3,960	\$2,685	\$10,000	\$5,000	\$155,947	4%	
	Not	75 April	\$134,000	\$8,029	\$4,000	-\$670	-\$135	\$5,000	\$5,000	\$155,224	5%	
	Not	345 Woodland	\$131,000	\$8,710		\$5,895	\$9,811		\$5,000	\$160,416	2%	
										Average	4%	

The best matched pair is 191 Amelia, which was most similar in time frame of sale and indicates a +4% increase in value due to the solar farm adjacency.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
15	Adjoins	297 Country	1.00	9/30/2016	\$150,000	2002	1,596	\$93.98	3/2	4-Gar	Ranch	
	Not	185 Dusty	1.85	8/17/2015	\$126,040	2009	1,463	\$86.15	3/2	2-Gar	Ranch	
	Not	53 Glen	1.13	3/9/2017	\$126,000	1999	1,475	\$85.42	3/2	2-Gar	Ranch	Brick

Adjoining Sales Adjusted												
Parcel	Solar	Address	Sales Price	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
15	Adjoins	297 Country	\$150,000							\$150,000		650
	Not	185 Dusty	\$126,040	\$4,355		-\$4,411	\$9,167	\$10,000		\$145,150	3%	
	Not	53 Glen	\$126,000	-\$1,699		\$1,890	\$8,269	\$10,000		\$144,460	4%	
										Average	3%	

The best matched pair is 53 Glen, which was most similar in time frame of sale and required less adjustment. It indicates a +4% increase in value due to the solar farm adjacency.

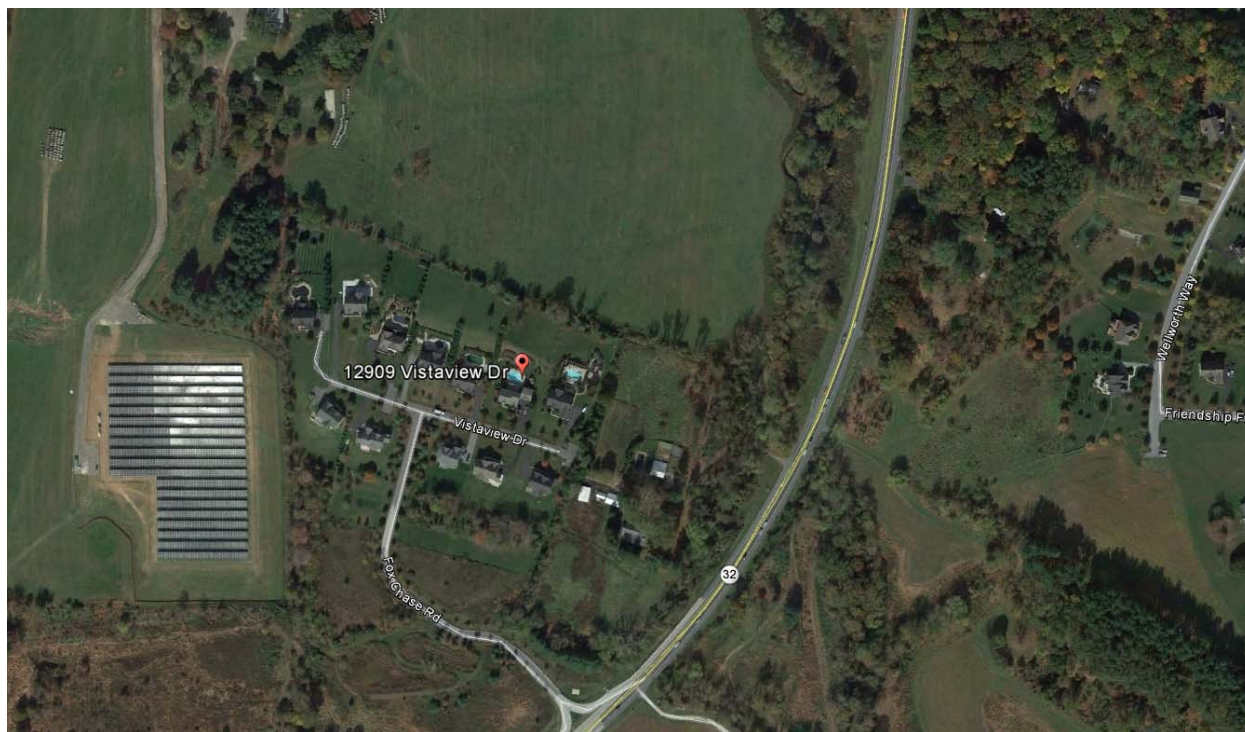
The average indicated impact from these three sets of matched pairs is +4%, which suggests a mild positive relationship due to adjacency to the solar farm.

I have also looked at several lot sales in this subdivision as shown below.

These are all lots within the same community and the highest prices paid are for lots one parcel off from the existing solar farm. These prices are fairly inconsistent, though they do suggest about a \$3,000 loss in the lots adjoining the solar farm. This is an atypical finding and additional details suggest there is more going on in these sales than the data crunching shows. First of all Parcel 4 was purchased by the owner of the adjoining home and therefore an atypical buyer seeking to expand a lot and the site is not being purchased for home development. Moreover, using the SiteToDoBusiness demographic tools, I found that the 1-mile radius around this development is expecting a total population increase over the next 5 years of 3 people. This lack of growing demand for lots is largely explained in that context. Furthermore, the fact that finished home sales as shown above are showing no sign of a negative impact on property value makes this data unreliable and inconsistent with the data shown in sales to an end user. I therefore place little weight on this outlier data.

Parcel	Solar	Address	Acres	Date Sold	Sales Price	4/18/2019	\$/AC	4/18/2019
						Adj for Time		Adj for Time
4	Adjoins	Shelter	2.05	10/25/2017	\$16,000	\$16,728	\$7,805	\$8,160
10	Adjoins	Carter	1.70	8/2/2018	\$14,000	\$14,306	\$8,235	\$8,415
11	Adjoins	Cooper	1.28	9/17/2018	\$12,000	\$12,215	\$9,375	\$9,543
	Not	75 Dusty	1.67	4/18/2019	\$20,000	\$20,000	\$11,976	\$11,976
	Not	Lake Trl	1.47	11/7/2018	\$13,000	\$13,177	\$8,844	\$8,964
	Not	Lake Trl	1.67	4/18/2019	\$20,000	\$20,000	\$11,976	\$11,976
		Adjoins	Per Acre	Not Adjoins	Per Acre	% DIF/Lot	% DIF/AC	
	Average	\$14,416	\$8,706	\$17,726	\$10,972	19%	21%	
	Median	\$14,306	\$8,415	\$20,000	\$11,976	28%	30%	
	High	\$16,728	\$9,543	\$20,000	\$11,976	16%	20%	
	Low	\$12,215	\$8,160	\$13,177	\$8,964	7%	9%	

5. Matched Pair – Nixon’s Solar Farm, West Friendship, MD



This smaller 2 MW solar farm being developed in phases mostly adjoins agricultural and residential uses as shown above. This is part of what will eventually be a 10 MW facility.

I compared a recent sale of 12909 Vistaview Drive to 2713 Friendship Farm Court. While this does not look at an adjacent home sale, it is close proximity and based on the matched pair data in the report it shows a \$16,640 positive impact on value due to proximity to the solar farm, or 2.16%. This is within typical market friction and supports an indication of no impact on property value.

I have shown this data below.

Nixon’s Farm Solar Farm, West Friendship, MD

Nearby Residential Sale After Solar Farm Construction

Address	Solar Farm	Acres	Date Sold	Sales Price*	Built	GBA	\$/GBA	Style	BR/BA	Park
12909 Vistaview	Nearby	0.92	9/12/2014	\$771,640	2003	2,692	\$286.64	Colonial	4/3.5	2 Car Det
2713 Friendship Farm	Not	0.98	6/20/2014	\$690,000	2000	2,792	\$247.13	Colonial	4/2.5	2 Car Att

*\$3,360 concession deducted from sale price for Vistaview

Adjoining Sales Adjusted

Address	Date Sold	Sales Price	Time	Adjustments			BR/BA	Other	Total
				Acres	YB				
12909 Vistaview	9/12/2014	\$771,640						\$771,640	
2713 Friendship Farm	6/20/2014	\$690,000		\$0	\$0	\$0	\$10,000	\$55,000	\$755,000

Difference Attributable to Location \$16,640
2.16%

6. Matched Pair – Leonard Road Solar Farm, Hughesville, MD



This solar farm mostly adjoins agricultural and residential uses to the west, south and east as shown above. The property also adjoins retail uses and a church. I looked at a 2016 sale of an adjoining home with a positive impact on value adjoining the solar farm of 2.90%. This is within typical market friction and supports an indication of no impact on property value.

I have shown this data below.

Leonardtown Road Solar Farm, Hughesville, MD

Nearby Residential Sale After Solar Farm Construction

Address	Solar Farm Acres	Date Sold	Sales Price*	Built	GBA	\$/GBA	Style	BR/BA	Bsmt	Park	Upgrades	Other
14595 Box Elder Ct	Adjoins	2/12/2016	\$291,000	1991	2,174	\$133.85	Colonial	5/2.5	No	2 Car Att	N/A	Deck
15313 Bassford Rd	Not	7/20/2016	\$329,800	1990	2,520	\$130.87	Colonial	3/2.5	Finished	2 Car Att	Custom	Scr Por/Patio

*\$9,000 concession deducted from sale price for Box Elder and \$10,200 deducted from Bassford

Adjoining Sales Adjusted

Address	Date Sold	Sales Price	Time	Adjustments				Total
				GLA	Bsmt	Upgrades	Other	
14595 Box Elder Ct	2/12/2016	\$291,000						\$291,000
15313 Bassford Rd	7/20/2016	\$329,800	-\$3,400	-\$13,840	-\$10,000	-\$15,000	-\$5,000	\$282,560

Difference Attributable to Location \$8,440
2.90%

This is within typical market friction and supports an indication of no impact on property value.

7. Matched Pair – Talbot County Community Center Solar Farm, Easton, MD



This solar farm mostly adjoins agricultural and residential uses but also the Community center and located across the street from a golf course which can be seen just to the east. I looked at a 2012 sale of a home 1,000 feet to the west of the solar farm with a slight positive impact on value nearby the solar farm.

I have shown this data below.

Talbot County Community Center, Easton, MD

Nearby Residential Sale After Solar Farm Construction

Address	Solar Farm	Acres	Date Sold	Sales Price*	Built	GBA	\$/GBA	Style	BR/BA	Park	Upgrades
10193 Hiners	Nearby	1.06	10/31/2012	\$136,092	1947	776	\$175.38	Bungalow	2/1	3 Car Det	N/A
10711 Hiners	Not	0.60	12/15/2012	\$135,000	1957	832	\$162.26	Bungalow	2/1	1 Car Det	Upd. Bath

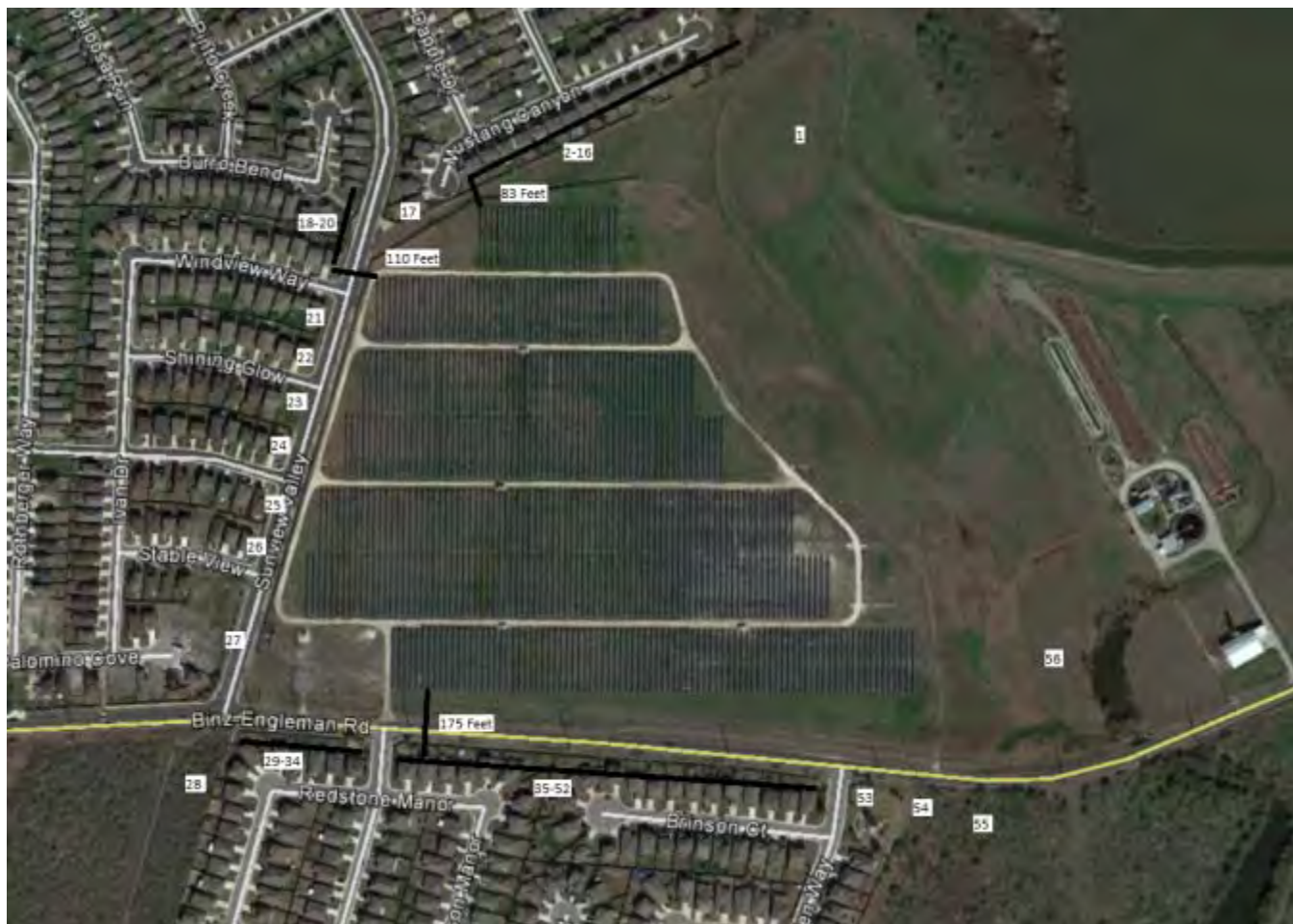
*\$5,908 concessions deducted from 10193 Hiners sales price

Adjoining Sales Adjusted

Address	Date Sold	Sales Price	Age	Adjustments				Total	
				Acres	Park	Upgrades	Other		
10193 Hiners	10/31/2012	\$136,092						\$136,092	
10711 Hiners	12/15/2012	\$135,000		-\$6,750	\$4,000	\$6,000	-\$3,000	\$0	\$135,250

Difference Attributable to Location \$842

8. Matched Pair – Alamo II, San Antonio, Texas



This project is located at 8203 Binz-Engleman Road, Converse, Texas, on 98.37 acres with a 4.4 MW output. This project is located with small lot residential development on to the north west and south. There appears to be minimal landscaping along this project. The closest home to the north is 83 feet from the solar panels, while the homes to the west are 110 feet and the homes to the south are 175 feet away from the solar panels.

This solar farm strongly shows an acceptance of nearby residential development in close proximity to solar farms as this solar farm has minimal landscaping, close proximity, small adjoining lot sizes, and the development of homes on three sides of the solar farm.

Adjoining Use Breakdown

Acreeage	Parcels
Residential	94.64%
Agricultural	5.36%
Total	100.00%

I have considered home sales in the three adjoining subdivisions to look at matched pair data. There are sales and resales of homes in Glenloch and Mustang Valley subdivisions to the south and west of this solar farm.

I have considered multiple matched pairs from these subdivisions to show typical appreciation and no impact on property value both before and after the solar farm was constructed in 2013. I have

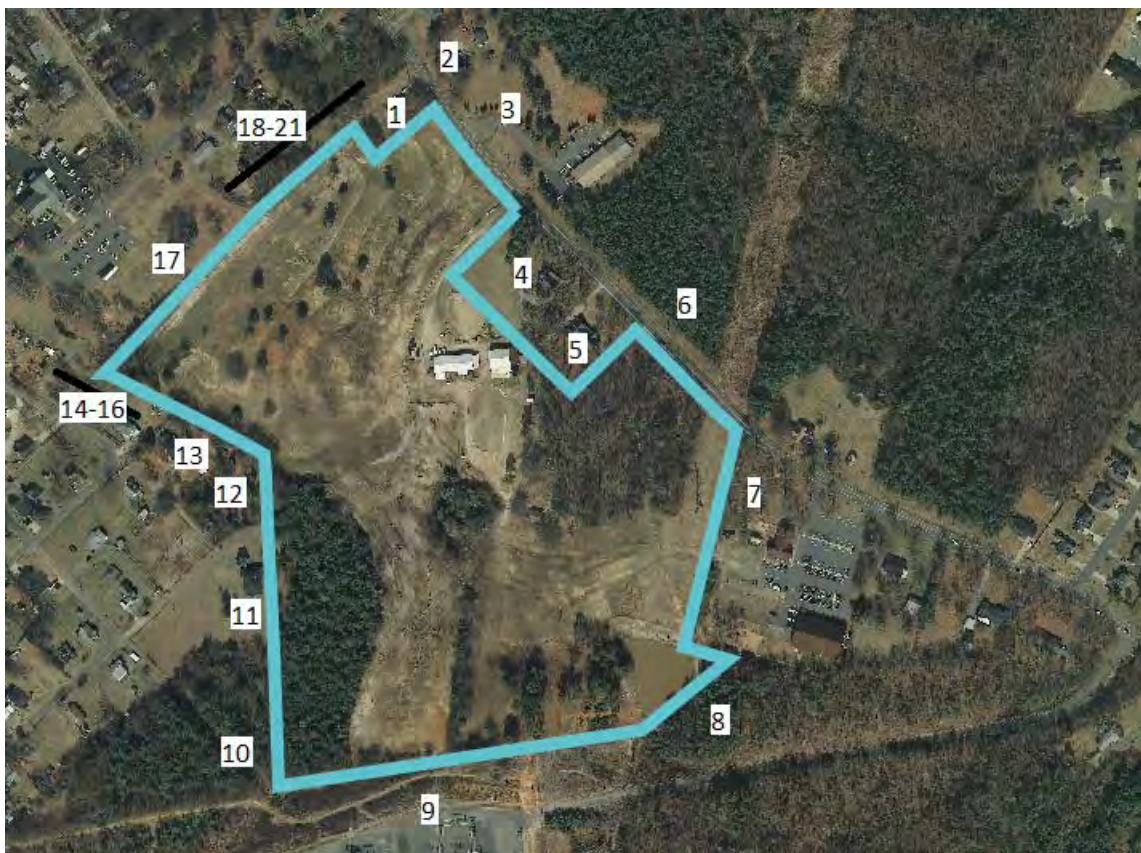
looked at a number of home sales and resales in the larger subdivisions, but I have focused on those directly adjoining/facing the solar farm in the examples shown below. These are sales and resales of the homes adjoining the solar farm both before and after the solar farm project in 2013.

The comparables shown below are compared to an earlier sale prior to the solar farm announcement or construction followed by a second sale after the solar farm. The first two have solar farms in the Backyard (B), while the other has the solar farm in the Side yard (S). All of these sales show appreciation that falls within the typical annual appreciation for homes in this area over this time period.

7703 Redstone Mnr (B)			7807 Redstone Mnr (B)			7734 Sundew Mist (S)		
	<u>Date</u>	<u>Price</u>		<u>Date</u>	<u>Price</u>		<u>Date</u>	<u>Price</u>
Sale	10/3/2012	\$149,980	Sale	5/11/2012	\$136,266	Sale	5/23/2012	\$117,140
Sale	3/24/2016	\$166,000	Sale	8/11/2014	\$147,000	Sale	11/18/2014	\$134,000
	<u>Time - YRS</u>	<u>% Incr.</u>		<u>Time - YRS</u>	<u>% Incr.</u>		<u>Time - YRS</u>	<u>% Incr.</u>
	3.47	10.7%		2.25	7.9%		2.49	14.4%
	<u>Per Year</u>	<u>3.1%</u>		<u>Per Year</u>	<u>3.5%</u>		<u>Per Year</u>	<u>5.8%</u>
Years	3.5	<u>10.8%</u>	Years	2.5	<u>8.7%</u>	Years	2	<u>11.6%</u>

I therefore conclude that this set of matched pairs shows no impact on property value and that homes in the area are showing typical appreciation consistent with other homes not in the vicinity of solar farms.

9. Matched Pair – Neal Hawkins Solar, Gastonia, NC



This project is located on the south side of Neal Hawkins Road just outside of Gastonia. The property identified above as Parcel 4 was listed for sale while this solar farm project was going through the approval process. The property was put under contract during the permitting process with the permit being approved while the due diligence period was still ongoing. After the permit was approved the property closed with no concerns from the buyer. I spoke with Jennifer Bouvier, the broker listing the property and she indicated that the solar farm had no impact at all on the sales price. She considered some nearby sales to set the price and the closing price was very similar to the asking price within the typical range for the market. The buyer was aware that the solar farm was coming and they had no concerns.

This two-story brick dwelling was sold on March 20, 2017 for \$270,000 for a 3,437 square foot dwelling built in 1934 in average condition on 1.42 acres. The property has four bedrooms and two bathrooms.

A more recent aerial photo is shown on the following page to illustrate the proximity of panels to homes.



10. Matched Pair – Summit/Ranchlands Solar, Moyock, NC



This project is located at 1374 Caritoke Highway, Moyock, NC. This is an 80 MW facility on a parent tract of 2,034 acres. Parcels Number 48 and 53 as shown in the map above were sold in 2016. The project was under construction during the time period of the first of the matched pair sales and the permit was approved well prior to that in 2015.

I looked at multiple sales of adjoining and nearby homes and compared each to multiple comparables to show a range of impacts from -10% up to +11% with an average of +2% and a median of +3%. These ranges are well within typical real estate variation and supports an indication of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved													
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
48	Adjoins	129 Pinto	4.29	4/15/2016	\$170,000	1985	1,559	\$109.04	3/2	Drive	MFG		1,060
	Not	102 Timber	1.30	4/1/2016	\$175,500	2009	1,352	\$129.81	3/2	Drive	MFG		
	Not	120 Ranchland	0.99	10/1/2014	\$170,000	2002	1,501	\$113.26	3/2	Drive	MFG		
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
	Adjoins	129 Pinto								\$170,000		-3%	
	Not	102 Timber	\$276	\$10,000	-\$29,484	\$18,809				\$175,101	-3%		
	Not	120 Ranchland	\$10,735	\$10,000	-\$20,230	\$4,598				\$175,103	-3%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
53	Adjoins	105 Pinto	4.99	12/16/2016	\$206,000	1978	1,484	\$138.81	3/2	Det Gar	Ranch		2,020
	Not	111 Spur	1.15	2/1/2016	\$193,000	1985	2,013	\$95.88	4/2	Gar	Ranch		
	Not	103 Marshall	1.07	3/29/2017	\$196,000	2003	1,620	\$120.99	3/2	Drive	Ranch		
	Not	127 Ranchland	0.99	6/9/2015	\$219,900	1988	1,910	\$115.13	3/2	Gar/3Gar	Ranch		
Solar		Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
Adjoins		105 Pinto								\$206,000		11%	
Not		111 Spur	\$6,918	\$10,000	-\$6,755	-\$25,359				\$177,803	14%		
Not		103 Marshall	-\$2,268	\$10,000	-\$24,500	-\$8,227		\$5,000		\$176,005	15%		
Not		127 Ranchland	\$13,738	\$10,000	-\$10,995	-\$24,523		-\$10,000		\$198,120	4%		

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
15	Adjoins	318 Green View	0.44	9/15/2019	\$357,000	2005	3,460	\$103.18	4/4	2-Car	1.5 Brick		570
	Not	195 St Andrews	0.55	6/17/2018	\$314,000	2002	3,561	\$88.18	5/3	2-Car	2.0 Brick		
	Not	336 Green View	0.64	1/13/2019	\$365,000	2006	3,790	\$96.31	6/4	3-Car	2.0 Brick		
	Not	275 Green View	0.36	8/15/2019	\$312,000	2003	3,100	\$100.65	5/3	2-Car	2.0 Brick		
Solar		Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
Adjoins		318 Green View								\$357,000		4%	
Not		195 St Andrews	\$12,040		\$4,710	-\$7,125	\$10,000			\$333,625	7%		
Not		336 Green View	\$7,536		-\$1,825	-\$25,425			-\$5,000	\$340,286	5%		
Not		275 Green View	\$815		\$3,120	\$28,986	\$10,000			\$354,921	1%		

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
29	Adjoins	164 Ranchland	1.01	4/30/2019	\$169,000	1999	2,052	\$82.36	4/2	Gar	MFG		440
	Not	150 Pinto	0.94	3/27/2018	\$168,000	2017	1,920	\$87.50	4/2	Drive	MFG		
	Not	105 Longhorn	1.90	10/10/2017	\$184,500	2002	1,944	\$94.91	3/2	Drive	MFG		
	Not	112 Pinto	1.00	7/27/2018	\$180,000	2002	1,836	\$98.04	3/2	Drive	MFG	Fenced	
Solar		Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
Adjoins		164 Ranchland								\$169,000		-10%	
Not		150 Pinto	\$5,649		-\$21,168	\$8,085			\$5,000	\$165,566	2%		
Not		105 Longhorn	\$8,816	-\$10,000	-\$3,875	\$7,175			\$5,000	\$191,616	-13%		
Not		112 Pinto	\$4,202		-\$3,780	\$14,824			\$5,000	\$200,245	-18%		

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	358 Oxford	10.03	9/16/2019	\$478,000	2008	2,726	\$175.35	3/3	2 Gar	Ranch		635
	Not	276 Summit	10.01	12/20/2017	\$355,000	2006	1,985	\$178.84	3/2	2 Gar	Ranch		
	Not	176 Providence	6.19	5/6/2019	\$425,000	1990	2,549	\$166.73	3/3	4 Gar	Ranch	Brick	
	Not	1601 B Caratoke	12.20	9/26/2019	\$440,000	2016	3,100	\$141.94	4/3.5	5 Gar	Ranch	Pool	
Solar		Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
Adjoins		358 Oxford								\$478,000		5%	
Not		276 Summit	\$18,996		\$3,550	\$106,017	\$10,000			\$493,564	-3%		
Not		176 Providence	\$4,763		\$38,250	\$23,609		-\$10,000	-\$25,000	\$456,623	4%		
Not		1601 B Caratoke	-\$371	\$50,000	-\$17,600	-\$42,467	-\$5,000	-\$10,000		\$414,562	13%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Nearby	343 Oxford	10.01	3/9/2017	\$490,000	2016	3,753	\$130.56	3/3	2 Gar	1.5 Story	Pool	970
	Not	287 Oxford	10.01	9/4/2017	\$600,000	2013	4,341	\$138.22	5/4.5	8-Gar	1.5 Story	Pool	
	Not	301 Oxford	10.00	4/23/2018	\$434,000	2013	3,393	\$127.91	5/3	2 Gar	1.5 Story		
	Not	218 Oxford	10.01	4/4/2017	\$525,000	2006	4,215	\$124.56	4/3	4 Gar	1.5 Story	VG Barn	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	343 Oxford								\$490,000		3%
Not	287 Oxford	-\$9,051		\$9,000	-\$65,017	-\$15,000	-\$25,000		\$494,932	-1%	
Not	301 Oxford	-\$14,995	-\$10,000	\$6,510	\$36,838				\$452,353	8%	
Not	218 Oxford	-\$1,150		\$26,250	-\$46,036		-\$10,000	-\$10,000	\$484,064	1%	



11. Matched Pair – White Cross II, Chapel Hill, NC



This project is located in rural Orange County on White Cross Road with a 2.8 MW facility. This project is a few parcels south of White Cross Solar Farm that was developed by a different company. An adjoining home sold after construction as presented below.

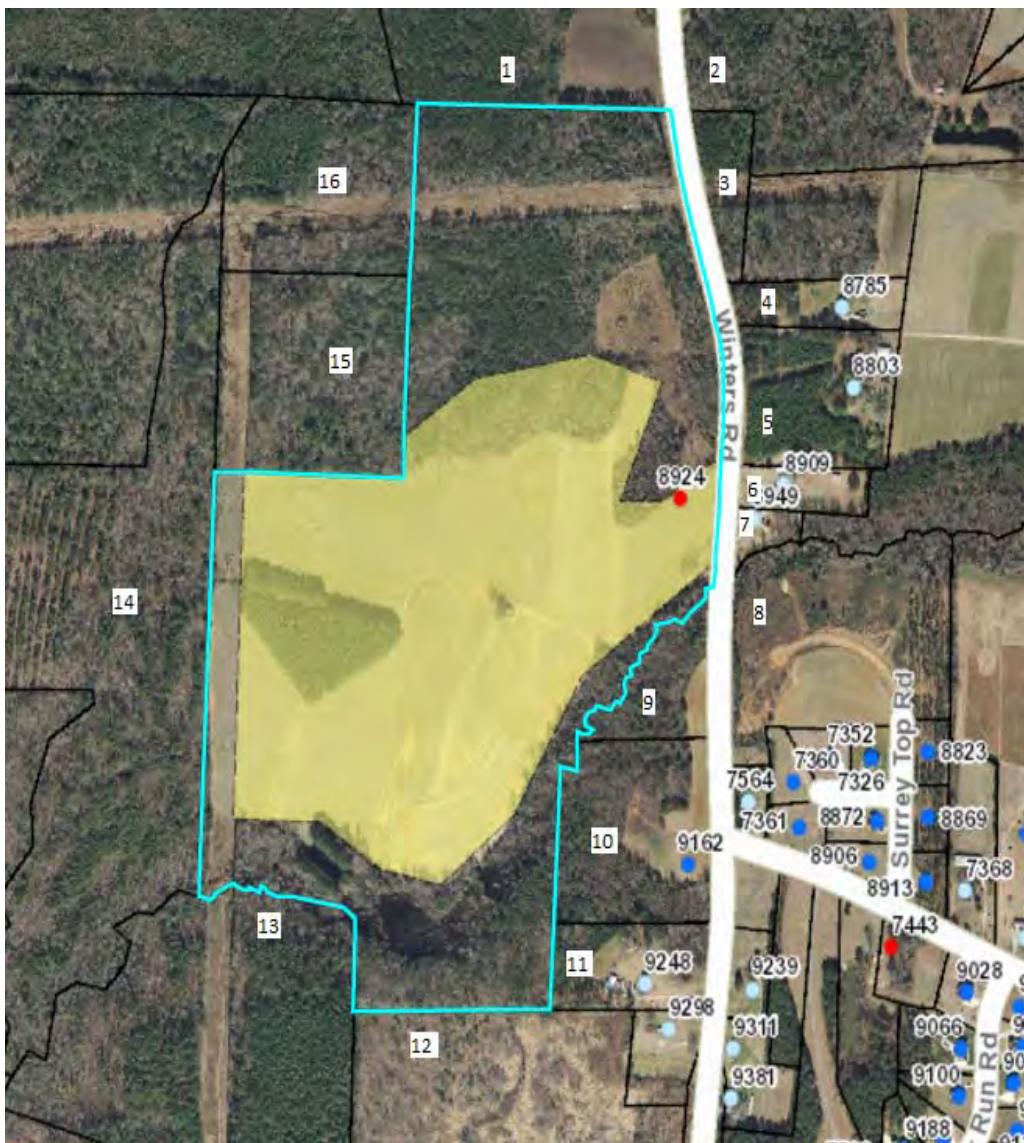
Adjoining Residential Sales After Solar Farm Completed

Solar	TAX ID/Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
Adjoins	97482114578	11.78	2/29/2016	\$340,000	1994	1,601	\$212.37	3/3	Garage	Ranch
Not	4200B Old Greensbor	12.64	12/28/2015	\$380,000	2000	2,075	\$183.13	3/2.5	Garage	Ranch

Adjoining Residential Sales After Solar Farm Adjoining Sales Adjusted

Solar	TAX ID/Address	Sales Price	Time	Acres	YB	GLA	BR/BA	Park	Total	% Diff
Adjoins	97482114578	\$340,000							\$340,000	
Not	4200B Old Greensbor	\$380,000	\$3,800	\$0	-\$15,960	-\$43,402	\$5,000	\$0	\$329,438	3%

12. Matched Pair – Tracy Solar, Bailey, NC



This project is located in rural Nash County on Winters Road with a 5 MW facility that was built in 2016. A local builder acquired parcels 9 and 10 following construction as shown below at rates comparable to other tracts in the area. They then built a custom home for an owner and sold that at a price similar to other nearby homes as shown in the matched pair data below.

Adjoining Land Sales After Solar Farm Completed

#	Solar Farm	TAX ID	Grantor	Grantee	Address	Acres	Date Sold	Sales Price	\$/AC	Other
9 & 10	Adjoins	316003 & 316004	Cozart	Kingsmill	9162 Winters	13.22	7/21/2016	\$70,000	\$5,295	
	Not	6056	Billingsly		427 Young	41	10/21/2016	\$164,000	\$4,000	
	Not	33211	Fulcher	Weikel	10533 Cone	23.46	7/18/2017	\$137,000	\$5,840	Doublewide, structures
	Not	106807	Perry	Gardner	Claude Lewis	11.22	8/10/2017	\$79,000	\$7,041	Gravel drive for sub, cleared
	Not	3437	Vaughan	N/A	11354 Old Lewis Sch	18.73	Listing	\$79,900	\$4,266	Small cemetery, wooded

Adjoining Sales Adjusted

Time	Acres	Location	Other	Adj \$/Ac	% Diff
				\$5,295	
\$0	\$400	\$0	\$0	\$4,400	17%
-\$292	\$292	\$0	-\$500	\$5,340	-1%
-\$352	\$0	\$0	-\$1,000	\$5,689	-7%
-\$213	\$0	\$0	\$213	\$4,266	19%
				Average	7%

Adjoining Residential Sales After Solar Farm Completed

#	Solar Farm	n	Address	Acres	Date Sold	Sales Price	Built	GLA	\$/GLA	BR/BA	Style	Other
9 & 10	Adjoins	9	9162 Winters	13.22	1/5/2017	\$255,000	2016	1,616	\$157.80	3/2	Ranch	1296 sf wrkshp
	Not	1	7352 Red Fox	0.93	6/30/2016	\$176,000	2010	1,529	\$115.11	3/2	2-story	

Adjoining Sales Adjusted

Time	Acres	YB	GLA	Style	Other	Total	% Diff
						\$255,000	
\$0	\$44,000	\$7,392	\$5,007	\$5,000	\$15,000	\$252,399	1%

The comparables for the land show either a significant positive relationship or a mild negative relationship to having and adjoining solar farm, but when averaged together they show no negative impact. The wild divergence is due to the difficulty in comping out this tract of land and the wide variety of comparables used. The two comparables that show mild negative influences include a property that was partly developed as a residential subdivision and the other included a doublewide with some value and accessory agricultural structures. The tax assessed value on the improvements were valued at \$60,000. So both of those comparables have some limitations for comparison. The two that show significant enhancement due to adjacency includes a property with a cemetery located in the middle and the other is a tract almost twice as large. Still that larger tract after adjustment provides the best matched pair as it required the least adjustment. I therefore conclude that there is no negative impact due to adjacency to the solar farm shown by this matched pair.

The dwelling that was built on the site was a build-to-suit and was compared to a nearby homesale of a property on a smaller parcel of land. I adjusted for that differenced based on a \$25,000 value for a 1-acre home site versus the \$70,000 purchase price of the larger subject tract. The other adjustments are typical and show no impact due to the adjacency to the solar farm.

The closest solar panel to the home is 780 feet away.

I note that the representative for Kingsmill Homes indicated that the solar farm was never a concern in purchasing the land or selling the home. He also indicated that they had built a number of nearby homes across the street and it had never come up as an issue.



13. Matched Pair – Manatee Solar Farm, Parrish, FL



This solar farm is located near Seminole Trail, Parrish, FL. The solar farm has a 74.50 MW output and is located on a 1,180.38 acre tract and was built in 2016. The tract is owned by Florida Power & Light Company.

I have considered the recent sale of 13670 Highland Road, Wimauma, Florida. This one-story, block home is located just north of the solar farm and separated from the solar farm by a railroad corridor. This home is a 3 BR, 3 BA 1,512 s.f. home with a carport and workshop. The property includes new custom cabinets, granite counter tops, brand new stainless steel appliances, updated bathrooms and new carpet in the bedrooms. The home is sitting on 5 acres. The home was built in 1997.

I have compared this sale to several nearby homesales as part of this matched pair analysis as shown below.

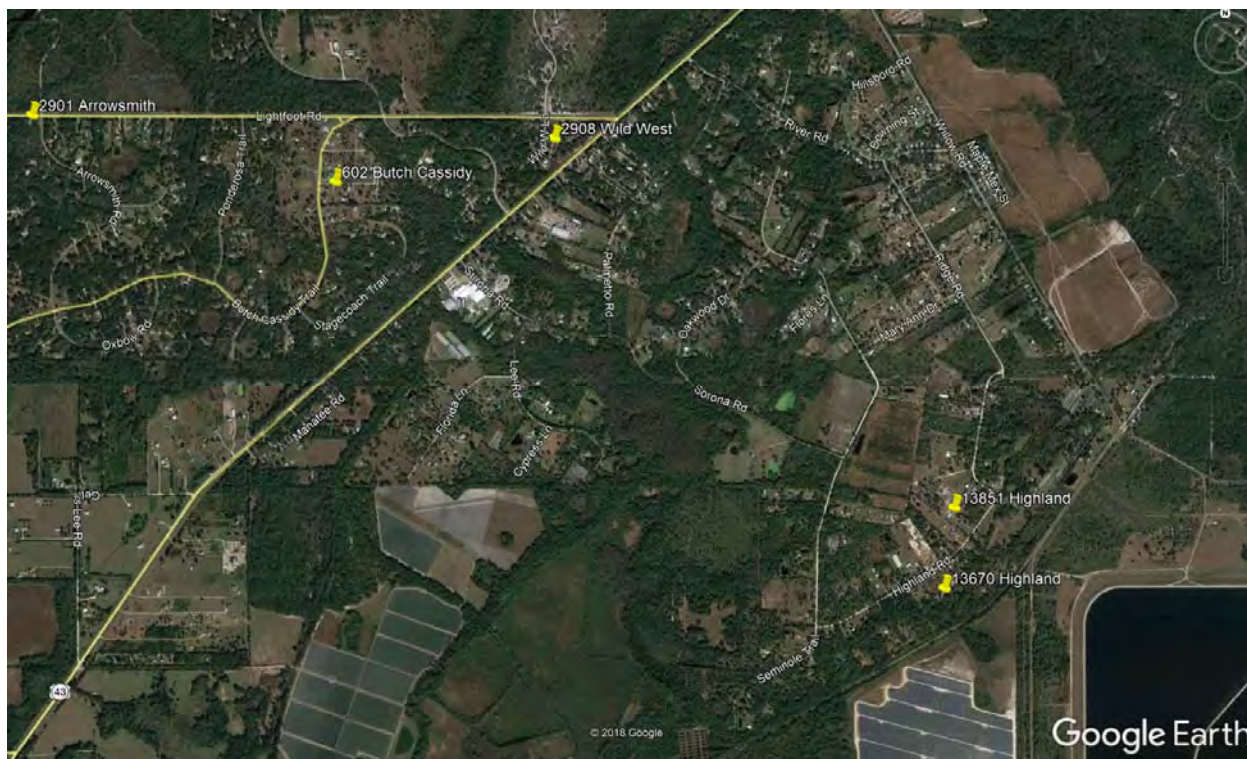
Solar	TAX ID/Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Note
Adjoins	13670 Highland	5.00	8/21/2017	\$255,000	1997	1,512	\$168.65	3/3	Carport/Wrkshp	Ranch	Renov.
Not	2901 Arrowsmith	1.91	1/31/2018	\$225,000	1979	1,636	\$137.53	3/2	2 Garage/Wrkshp	Ranch	
Not	602 Butch Cassidy	1.00	5/5/2017	\$220,000	2001	1,560	\$141.03	3/2	N/A	Ranch	Renov.
Not	2908 Wild West	1.23	7/12/2017	\$254,000	2003	1,554	\$163.45	3/2	2 Garage/Wrkshp	Ranch	Renov.
Not	13851 Highland	5.00	9/13/2017	\$240,000	1978	1,636	\$146.70	4/2	3 Garage	Ranch	Renov.

Solar	TAX ID/Address	Adjoining Sales Adjusted					BR/BA	Park	Note	Total	% Diff
		Time	Acres	YB	GLA						
Adjoins	13670 Highland								\$255,000		
Not	2901 Arrowsmith	\$2,250	\$10,000	\$28,350	-\$8,527	\$5,000	-\$10,000	\$10,000	\$262,073	-3%	
Not	602 Butch Cassidy	-\$2,200	\$10,000	-\$6,160	-\$3,385	\$5,000	\$2,000		\$225,255	12%	
Not	2908 Wild West	\$0	\$10,000	-\$10,668	-\$3,432	\$5,000	-\$10,000		\$244,900	4%	
Not	13851 Highland	\$0	\$0	\$31,920	-\$9,095	\$3,000	-\$10,000		\$255,825	0%	
									Average	3%	

The sales prices of the comparables before adjustments range from \$220,000 to \$254,000. After adjustments they range from \$225,255 to \$262,073. The comparables range from no impact to a strong positive impact. The comparables showing -3% and +4% impact on value are considered within a typical range of value and therefore not indicative of any impact on property value.

This set of matched pair data falls in line with the data seen in other states. The closest solar panel to the home at 13670 Highland is 1,180 feet. There is a wooded buffer between these two properties.

I have included a map showing the relative location of these properties below.



14. Matched Pair – McBride Place Solar Farm, Midland, NC

This project is located on Mount Pleasant Road, Midland, North Carolina. The property is on 627 acres on an assemblage of 974.59 acres. The solar farm was approved in early 2017 for a 74.9 MW facility.

I have considered the sale of 4380 Joyner Road which adjoins the proposed solar farm near the northwest section. This property was appraised in April of 2017 for a value of \$317,000 with no

consideration of any impact due to the solar farm in that figure. The property sold in November 2018 for \$325,000 with the buyer fully aware of the proposed solar farm.

I have considered the following matched pairs to the subject property.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	4380 Joyner	12.00	11/22/2017	\$325,000	1979	1,598	\$203.38	3/2	2xGar	Ranch	Outldg
Not	3870 Elkwood	5.50	8/24/2016	\$250,000	1986	1,551	\$161.19	3/2.5	Det 2xGar	Craft	
Not	8121 Lower Rocky	18.00	2/8/2017	\$355,000	1977	1,274	\$278.65	2/2	2xCarppt	Ranch	Eq. Fac.
Not	13531 Cabarrus	7.89	5/20/2016	\$267,750	1981	2,300	\$116.41	3/2	2xGar	Ranch	

Adjoining Sales Adjusted

Time	Acres	YB	Condition	GLA	BR/BA	Park	Other	Total	% Diff
								\$325,000	
\$7,500	\$52,000	-\$12,250	\$10,000	\$2,273	-\$2,000	\$2,500	\$7,500	\$317,523	2%
\$7,100	-\$48,000	\$4,970		\$23,156	\$0	\$3,000	-\$15,000	\$330,226	-2%
\$8,033	\$33,000	-\$3,749	\$20,000	-\$35,832	\$0	\$0	\$7,500	\$296,702	9%
								Average	3%

The home at 4380 Joyner Road is 275 feet from the closest solar panel.

I also considered the recent sale of a lot at 5800 Kristi Lane that is on the east side of the proposed solar farm. This 4.22-acre lot sold in December 2017 for \$94,000. A home was built on this lot in 2019 with the closest point from home to panel at 689 feet. The home site is heavily wooded and their remains a wooded buffer between the solar panels and the home. I spoke with the broker, Margaret Dabbs, who indicated that the solar farm was considered a positive by both buyer and seller as it insures no subdivision will be happening in that area. Buyers in this market are looking for privacy and seclusion.

The breakdown of recent lot sales on Kristi are shown below with the lowest price paid for the lot with no solar farm exposure, though that lot has exposure to Mt Pleasant Road South. Still the older lot sales have exposure to the solar farm and sold for higher prices than the front lot and adjusting for time would only increase that difference.

Adjoining Lot Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	\$/AC	\$/Lot
	Adjoins	5811 Kristi	3.74	5/1/2018	\$100,000	\$26,738	\$100,000
	Adjoins	5800 Kristi	4.22	12/1/2017	\$94,000	\$22,275	\$94,000
	Not	5822 Kristi	3.43	2/24/2020	\$90,000	\$26,239	\$90,000

The lot at 5811 Kristi Lane sold in May 2018 for \$100,000 for a 3.74-acre lot. The home that was built later in 2018 is 505 feet to the closest panel. This home then sold to a homeowner for \$530,000 in April 2020. I have compared this home sale to other properties in the area as shown below.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	5811 Kristi	3.74	3/31/2020	\$530,000	2018	3,858	\$137.38	5/3.5	2 Gar	2-story	Cement Ext
Not	3915 Tania	1.68	12/9/2019	\$495,000	2007	3,919	\$126.31	3/3.5	2 Gar	2-story	3Det Gar
Not	6782 Manatee	1.33	3/8/2020	\$460,000	1998	3,776	\$121.82	4/2/2h	2 Gar	2-story	Water
Not	314 Old Hickory	1.24	9/20/2019	\$492,500	2017	3,903	\$126.18	6/4.5	2 Gar	2-story	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	5811 Kristi								\$530,000		5%
Not	3915 Tania	\$6,285		\$27,225	-\$3,852		-\$20,000		\$504,657	5%	
Not	6782 Manatee	\$1,189		\$46,000	\$4,995	\$5,000			\$517,183	2%	
Not	314 Old Hickory	\$10,680		\$2,463	-\$2,839	-\$10,000			\$492,803	7%	

After adjusting the comparables, I found that the average adjusted value shows a slight increase in value for the subject property adjoining a solar farm. As in the other cases, this is a mild positive and within the typical range of real estate transactions. I therefore conclude that these matched pairs show no impact on value.

15. Matched Pair – Yamhill II, Amity, OR



This solar farm has a 1.2 MW output and is located on a 186.60 acre tract using less than 10 of those acres. The project was built in 2011.

I have considered the recent sale of Parcel 11 shown above, which sold on July 22, 2015 after the solar farm was built. The property sold for \$326,456 for a 2.12 acre site with a home built in 1912 with 2,154 s.f. and 4 BR and 2 BA. It was noted as a recently remodeled residence with outbuildings that sold for \$151.56 per square foot. I compared this to a number of similar older residences on similar acreage as shown below.

Adjoining Residential Sales After Solar Farm Approved										Adjust for Adjusted Adjusted		
Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Time	Sales	\$/SF	
Adjoins	12001 SW Bellevue, Amity	2.12	7/22/2015	\$326,456	1912	2,154	\$151.56	4/2				
Not	19915 SW Muddy, McMinnville	1.82	2/28/2011	\$213,400	1910	1,798	\$118.69	3/2	27%	\$271,018	\$150.73	
Not	22600 Hopewell, Salem	1.00	10/15/2014	\$256,000	1910	1,966	\$130.21	3/2	5%	\$268,800	\$136.72	
Not	22355 Hopewell, Salem	1.00	11/13/2015	\$320,000	1930	2,592	\$123.46	3/2	-2%	\$313,600	\$120.99	
Not	9955 Bethel, Amity	2.86	2/17/2016	\$289,900	1936	2,028	\$142.95	3/2	-4%	\$278,304	\$137.23	
Not	3361 Lone Oak, McMinnville	2.91	3/1/2016	\$465,000	1937	2,950	\$157.63	3/2	-7%	\$432,450	\$146.59	
										Average	\$138.45	
										Median	\$137.23	

The sales prices of the comparables were only adjusted for time and provide a range of adjusted values of \$120.99 per square foot to \$150.73 per square foot. The subject property sold for above the high end of this range despite being on the older end of the range of comparables. Considering 9955 Bethel as the most similar in acreage, age and size and the price per square foot which adjusted to the median rate at \$137.23 per square foot. Applying that rate to the subject property square footage, the indicated value is \$295,593 for that matched pair, suggesting a 9% enhancement due to the adjacency to the solar farm.

This set of matched pair data falls in line with the data seen in other states. The home is 700 feet from the closest solar panel.

16. Matched Pair – Marion Solar, Aurora, OR



This solar farm has a 0.3 MW output and is located on a 2-acre portion of a 31.76-acre tract. The project was built in 2014.

I have considered the recent sale of Parcels 5 and 6 shown above, which sold on August 6, 2014 after the solar farm was built for \$259,000, or \$16,444 per acre for a combined 15.75 acres. This was sold as vacant agricultural land with a permitted home site.

I compared this to a number of similar land sales as shown below.

Adjoining Residential Land Sales After Solar Farm Approved								Adj for	Adjusted	Adjusted
Solar	Address	Acres	Date Sold	Sales Price	\$/Ac	Soils	Homesite	Time	Sales	\$/SF
Adjoins	18916 Butteville, Aurora	15.75	8/6/2014	\$259,000	\$16,444	2&3	Est.			
Not	15961 Wilsonville, Wilsonville	50.50	5/20/2014	\$950,000	\$18,812	2&3	Est.	1.5%	\$964,250	\$19,094
Not	11471 Wilco, Mt. Angel	13.31	11/10/2014	\$159,500	\$11,983	2&4	N/A	-1.5%	\$157,108	\$11,804
Not	Waconda, Salem	11.86	9/9/2015	\$215,000	\$18,128	2	N/A	-6.5%	\$201,025	\$16,950
									Average	\$15,949
									Median	\$16,950

The sales price for the subject property is in line and between the average and median rates from the comparables. The sale at 11471 Wilco is the most similar in terms of acreage, time, and location. The sale on Waconda is similar in size, but newer and required more adjustment. I therefore conclude that no impact due to the proximity of the solar farm.

17. Matched Pair – Clackamas II, Aurora, OR



This solar farm has a 0.22 MW output and is located on a 1-acre portion of a 156.32-acre tract. The project was built in 2014.

I have considered the homesales along SW Fairway Drive both before and after the solar farm was announced to see if there was any impact on total sales price or price per square foot. As can be seen in the chart below, the sales prices continued to trend upward after the announcement and the price per square foot continued to trend upward. These homes are all approximately 125 feet from the closest solar panel.

I adjusted these based on 0.75% per month difference in date of sale to January 1, 2014. The indicated average and median rate are right in line with the sales before and after the solar farm was built. These comparables strongly indicate no impact in sales price.

Adjoining Residential Sales Before and After Solar Farm Announced								Adjust	Adjusted	Adjusted
Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Time	Sales	\$/SF
Prior	7500 SW Fairway	0.20	12/9/2011	\$365,000	1992	2,435	\$149.90	18.8%	\$433,620	\$178.08
Prior	7580 SW Fairway	0.30	11/21/2012	\$335,000	1990	2,256	\$148.49	11%	\$370,175	\$164.08
Prior	7480 SW Fairway	0.19	6/27/2013	\$365,000	1992	2,244	\$162.66	5%	\$384,345	\$171.28
							\$153.68	Average		\$171.15
							\$149.90	Median		\$171.28
After	7620 SW Fairway	0.27	7/1/2013	\$365,000	1992	2,212	\$165.01	3.8%	\$378,870	\$171.28
After	7700 SW Fairway	0.18	6/11/2014	\$377,100	1991	2,328	\$161.98	-2%	\$371,444	\$159.55
After	7380 SW Fairway	0.19	7/18/2014	\$415,000	1989	2,115	\$196.22	-6%	\$390,100	\$184.44
							\$174.40	Average		\$171.76
							\$165.01	Median		\$171.28

18. Matched Pair – Grand Ridge Solar, Streator, IL



This solar farm has a 20 MW output and is located on a 160-acre tract. The project was built in 2012.

I have considered the recent sale of Parcel 13 shown above, which sold in October 2016 after the solar farm was built. I have compared that sale to a number of nearby residential sales not in proximity to the solar farm as shown below. Parcel 13 is 480 feet from the closest solar panel.

Adjoining Residential Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA
13	34-21-237-000	2	Oct-16	\$186,000	1997	2,328	\$79.90

Not Adjoining Residential Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA
712 Columbus Rd	32-39-134-005	1.26	Jun-16	\$166,000	1950	2,100	\$79.05
504 N 2782 Rd	18-13-115-000	2.68	Oct-12	\$154,000	1980	2,800	\$55.00
7720 S Dwight Rd	11-09-300-004	1.14	Nov-16	\$191,000	1919	2,772	\$68.90
701 N 2050th Rd	26-20-105-000	1.97	Aug-13	\$200,000	2000	2,200	\$90.91
9955 E 1600th St	04-13-200-007	1.98	May-13	\$181,858	1991	2,600	\$69.95

TAX ID	Date Sold	Time	Adjustments	
			Total	\$/Sf
34-21-237-000	Oct-16		\$186,000	\$79.90
32-39-134-005	Jun-16		\$166,000	\$79.05
18-13-115-000	Oct-12	\$12,320	\$166,320	\$59.40
11-09-300-004	Nov-16		\$191,000	\$68.90
26-20-105-000	Aug-13	\$12,000	\$212,000	\$96.36
04-13-200-007	May-13	\$10,911	\$192,769	\$74.14

	Adjoins Solar Farm		Not Adjoin Solar Farm	
	Average	Median	Average	Median
Sales Price/SF	\$79.90	\$79.90	\$75.57	\$74.14
GBA	2,328	2,328	2,494	2,600

Based on the matched pairs I find no indication of negative impact due to proximity to the solar farm.

The most similar comparable is the home on Columbus that sold for \$79.05 per square foot. This is higher than the median rate for all of the comparables. Applying that price per square foot to the subject property square footage indicates a value of \$184,000.

19. Matched Pair – Portage Solar, Portage, IN



This solar farm has a 2 MW output and is located on a portion of a 56-acre tract. The project was built in 2012.

I have considered the recent sale of Parcels 5 and 12. Parcel 5 is an undeveloped tract, while Parcel 12 is a residential home. I have compared each to a set of comparable sales to determine if there was any impact due to the adjoining solar farm. This home is 1,320 feet from the closest solar panel.

Adjoining Residential Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA
12	64-06-19-326-007.000-015	1.00	Sep-13	\$149,800	1964	1,776	\$84.35

Nearby Residential Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA
2501 Architect Dr	64-04-32-202-004.000-021	1.31	Nov-15	\$191,500	1959	2,064	\$92.78
336 E 1050 N	64-07-09-326-003.000-005	1.07	Jan-13	\$155,000	1980	1,908	\$81.24
2572 Pryor Rd	64-05-14-204-006.000-016	1.00	Jan-16	\$216,000	1960	2,348	\$91.99

Adjoining Land Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	\$/AC
5	64-06-19-200-003.000-015	18.70	Feb-14	\$149,600	\$8,000

Nearby Land Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	\$/AC
	64-07-22-401-001.000-005	74.35	Jun-17	\$520,450	\$7,000
	64-15-08-200-010.000-001	15.02	Jan-17	\$115,000	\$7,658

Residential Sale Adjustment Chart

TAX ID	Date Sold	Adjustments		\$/Sf
		Time	Total	
64-06-19-326-007.000-015	Sep-13	\$8,988	\$158,788	\$89.41
64-04-32-202-004.000-021	Nov-15	\$3,830	\$195,330	\$94.64
64-07-09-326-003.000-005	Jan-13	\$9,300	\$164,300	\$86.11
64-05-14-204-006.000-016	Jan-16		\$216,000	\$91.99

2% adjustment/year
Adjusted to 2017

	Adjoins Solar Farm		Not Adjoin Solar Farm	
	Average	Median	Average	Median
Sales Price/SF	\$89.41	\$89.41	\$90.91	\$91.99
GBA	1,776	1,776	2,107	2,064

After adjusting the price per square foot is 2.88% less for the home adjoining the solar farm versus those not adjoining the solar farm. This is within the typical range of variation to be anticipated in any real estate transaction and indicates no impact on property value.

Applying the price per square foot for the 336 E 1050 N sale, which is the most similar to the Parcel 12 sale, the adjusted price at \$81.24 per square foot applied to the Parcel 12 square footage yields a value of \$144,282.

Land Sale Adjustment Chart

TAX ID	Date Sold	Adjustments		\$/Acre
		Time	Total	
64-06-19-200-003.000-015	Feb-14	\$8,976	\$158,576	\$8,480
64-07-22-401-001.000-005	Jun-17		\$520,450	\$7,000
64-15-08-200-010.000-001	Jan-17		\$115,000	\$7,658

2% adjustment/year
Adjusted to 2017

	Adjoins Solar Farm		Not Adjoin Solar Farm	
	Average	Median	Average	Median
Sales Price/Ac	\$8,480	\$8,480	\$7,329	\$7,329
Acres	18.70	18.70	44.68	44.68

After adjusting the price per acre is higher for the property adjoining the solar farm, but the average and median size considered is higher which suggests a slight discount. This set of matched pair supports no indication of negative impact due to the adjoining solar farm.

Alternatively, adjusting the 2017 sales back to 2014 I derive an indicated price per acre for the comparables at \$6,580 per acre to \$7,198 per acre, which I compare to the unadjusted subject property sale at \$8,000 per acre.

20. Matched Pair – Dominion Indy III, Indianapolis, IN

This solar farm has an 8.6 MW output and is located on a portion of a 134-acre tract. The project was built in 2013.

There are a number of homes on small lots located along the northern boundary and I have considered several sales of these homes. I have compared those homes to a set of nearby not adjoining home sales as shown below. The adjoining homes that sold range from 380 to 420 feet from the nearest solar panel, with an average of 400 feet.

Adjoining Residential Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA
2	2013249	0.38	12/9/2015	\$140,000	2006	2,412	\$58.04
4	2013251	0.23	9/6/2017	\$160,000	2006	2,412	\$66.33
5	2013252	0.23	5/10/2017	\$147,000	2009	2,028	\$72.49
11	2013258	0.23	12/9/2015	\$131,750	2011	2,190	\$60.16
13	2013260	0.23	3/4/2015	\$127,000	2005	2,080	\$61.06
14	2013261	0.23	2/3/2014	\$120,000	2010	2,136	\$56.18

Nearby Not Adjoining Residential Sales After Solar Farm Completed

#	TAX ID	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA
5836 Sable Dr	2013277	0.14	Jun-16	\$141,000	2005	2,280	\$61.84
5928 Mosaic Pl	2013845	0.17	Sep-15	\$145,000	2007	2,280	\$63.60
5904 Minden Dr	2012912	0.16	May-16	\$130,000	2004	2,252	\$57.73
5910 Mosaic Pl	2000178	0.15	Aug-16	\$146,000	2009	2,360	\$61.86
5723 Minden Dr	2012866	0.26	Nov-16	\$139,900	2005	2,492	\$56.14

Adjustments

TAX ID	Date Sold	Time	Total	\$/Sf
2013249	12/9/2015	\$5,600	\$145,600	\$60.36
2013251	9/6/2017		\$160,000	\$66.33
2013252	5/10/2017		\$147,000	\$72.49
2013258	12/9/2015	\$5,270	\$137,020	\$62.57
2013260	3/4/2015	\$5,080	\$132,080	\$63.50
2013261	2/3/2014	\$7,200	\$127,200	\$59.55
2013277	6/1/2016	\$2,820	\$143,820	\$63.08
2013845	9/1/2015	\$5,800	\$150,800	\$66.14
2012912	5/1/2016	\$2,600	\$132,600	\$58.88
2000178	8/1/2016	\$2,920	\$148,920	\$63.10
2012866	11/1/2016	\$2,798	\$142,698	\$57.26

2% adjustment/year
Adjusted to 2017

	Adjoins Solar Farm		Not Adjoin Solar Farm	
	Average	Median	Average	Median
Sales Price/SF	\$64.13	\$63.03	\$61.69	\$63.08
GBA	2,210	2,163	2,333	2,280

This set of homes provides very strong indication of no impact due to the adjacency to the solar farm and includes a large selection of homes both adjoining and not adjoining in the analysis.

21. Matched Pair – Beetle-Shelby Solar, Cleveland County, NC



This project is located on Bachelor Road at Timber Drive, Mooresboro, NC. This is a 4 MW facility on a parent tract of 24 acres.

I have considered a custom home on a nearby property adjoining this solar farm. This home is located on 10.08 acres, was built in 2013, and has a gross living area of 3,196 s.f. This property sold on October 1, 2018 \$416,000. I compared this to several nearby homes of similar size on large lots as shown below.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	1715 Timber	10.08	10/1/2018	\$416,000	2013	3,196	\$130.16	4/3.5	2xGar	1.5 story	Pool, Scrn Prch
Not	1021 Posting	2.45	2/15/2019	\$414,000	2000	4,937	\$83.86	4/4.5	2xGar	1.5 story	Scrn Prch
Not	2521 Wood	3.25	7/30/2017	\$350,000	2003	3,607	\$97.03	4/4	4xGar	1.5 story	Pool, sunroom
Not	356 Whitaker	7.28	1/9/2017	\$340,000	1997	3,216	\$105.72	4/4	2xGar	Ranch	Pole barn

Adjoining Sales Adjusted

Time	Acres	YB	GLA	BR/BA	Park	Other	Total	% Diff
							\$416,000	
	\$15,000	\$37,674	-\$58,398	-\$10,000			\$398,276	4%
\$10,500	\$12,000	\$24,500	-\$15,952	-\$5,000	-\$5,000		\$371,048	11%
\$15,300	\$5,000	\$38,080	-\$846	-\$5,000			\$392,534	6%
							Average	7%

The data on these sales all show that the subject property adjoining the solar farm sold for more than these other comparable sales. These sales suggest a mild increase in value due to proximity to the solar farm; however, the subject property is a custom home with upgrades that would balance out that difference. I therefore conclude that these matched pairs support an indication of no impact on property value.

22. Matched Pair – Courthouse Solar, Gaston County, NC



This project is a 5 MW facility located on 161.92 acres on Tryon Courthouse Road near Bessemer City that was approved in late 2016 but has not yet been constructed due to delays in the power purchase agreement process with Duke Progress Energy.

I have considered a recent sale of a home (Parcel 13) located across from this approved solar farm project as well as an adjoining lot sale (Parcel 25) to the west of this approved project.

I compared the home sale to similar sized homes with similar exposure to county roads as shown below. I considered three similar sales that once adjusted for differences show a positive relationship due to proximity to the solar farm. The positive impact is less than 5% which is a standard deviation for real estate transaction and indicates no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
Adjoins	2134 Tryon Court.	0.85	3/15/2017	\$111,000	2001	1,272	\$87.26	3/2	Drive	Ranch
Not	214 Kiser	1.14	1/5/2017	\$94,000	1987	1,344	\$69.94	3/2	Drive	Ranch
Not	101 Windward	0.30	3/30/2017	\$104,000	1995	1,139	\$91.31	3/2	Drive	Ranch
Not	5550 Lennox	1.44	10/12/2018	\$115,000	2002	1,224	\$93.95	3/2	Drive	Ranch

Adjoining Residential Sales After Solar Farm Approved

Adjoining Sales Adjusted

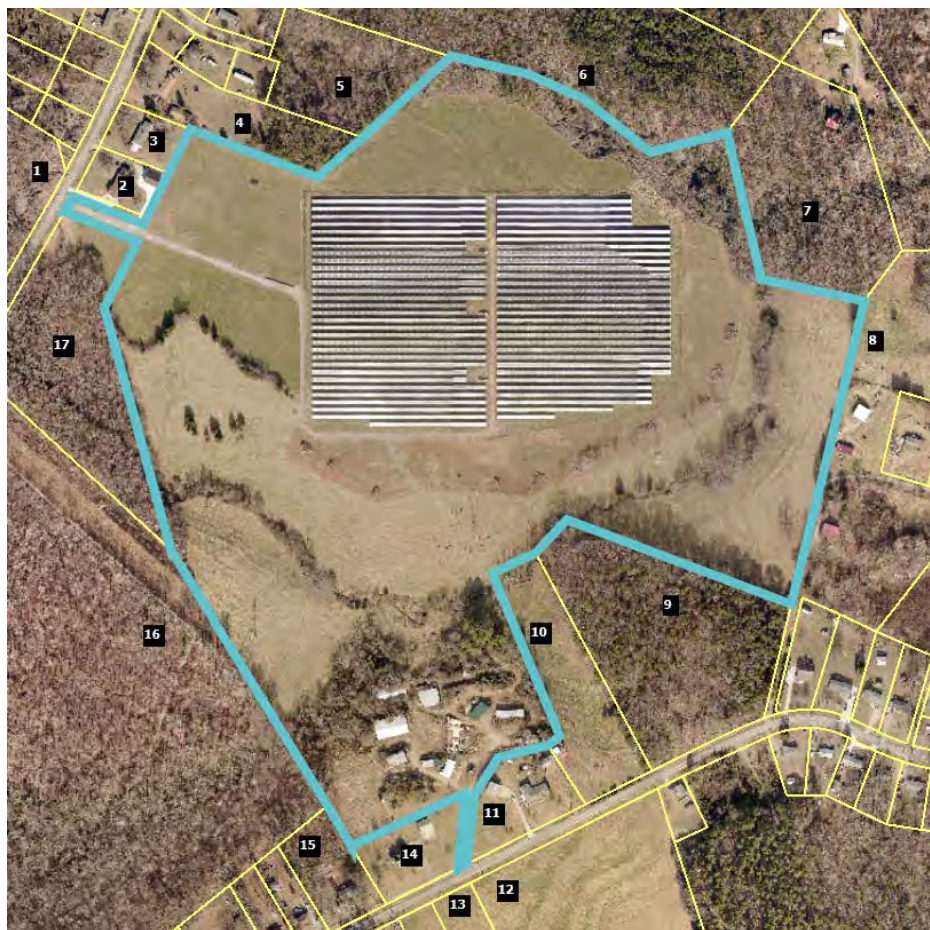
Solar	Address	Acres	Date Sold	Sales Price	Time	Acres	YB	GLA	Total	% Diff
Adjoins	2134 Tryon Court.	0.85	3/15/2017	\$111,000					\$111,000	
Not	214 Kiser	1.14	1/5/2017	\$94,000	\$533		\$9,212	-\$1,511	\$102,234	8%
Not	101 Windward	0.30	3/30/2017	\$104,000	-\$128		\$4,368	\$5,615	\$113,855	-3%
Not	5550 Lennox	1.44	10/12/2018	\$115,000	-\$5,444		-\$805	-\$2,396	\$106,355	4%
									Average	3%

Similarly, I compared the lot sale to four nearby land sales. Parcel 25 could not be subdivided and was a single estate lot. There were a number of nearby lot sales along Weaver Dairy that sold for \$43,000 to \$30,000 per lot for 4-acre home lots. Estate lots typically sell at a base homesite rate

that would be represented by those prices plus a diminishing additional value per additional acre. The consideration of the larger tract more accurately illustrates the value per acre for larger tracts. After adjustments, the land sales show a mild positive impact on land value with an average increase of 9%, which supports a positive impact.

Adjoining Residential Land Sales After Solar Farm Approved						Adjoining Sales Adjusted				
Solar	Address	Acres	Date Sold	Sales Price	\$/Ac	Time	Acres	Total	% Diff	Note
Adjoins	5021 Buckland	9.66	3/21/2018	\$58,500	\$6,056			\$58,500		1 homesite only
Not	Campbell	6.75	10/31/2018	\$42,000	\$6,222	-\$773	\$18,107	\$59,333	-1%	
Not	Kiser	17.65	11/27/2017	\$69,000	\$3,909	\$647	-\$19,508	\$50,139	14%	6 acres less usable due to shape (50%)
Not	522 Weaver Dairy	3.93	2/26/2018	\$30,000	\$7,634	\$57	\$25,000	\$55,057	6%	
Not	779 Sunnyside	6.99	3/6/2017	\$34,000	\$4,864	\$1,062	\$12,987	\$48,049	18%	
Average									9%	

23. Matched Pair – Mariposa Solar, Gaston County, NC



This project is a 5 MW facility located on 35.80 acres out of a parent tract of 87.61 acres at 517 Blacksnsake Road, Stanley that was built in 2016.

I have considered a number of recent sales around this facility as shown below.

The first is identified in the map above as Parcel 1, which is 215 Mariposa Road. This is an older dwelling on large acreage with only one bathroom. I've compared it to similar nearby homes as shown below.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
Adjoins	215 Mariposa	17.74	12/12/2017	\$249,000	1958	1,551	\$160.54	3/1	Garage	Br/Rnch
Not	249 Mariposa	0.48	3/1/2019	\$153,000	1974	1,792	\$85.38	4/2	Garage	Br/Rnch
Not	110 Airport	0.83	5/10/2016	\$166,000	1962	2,165	\$76.67	3/2	Crprt	Br/Rnch
Not	1249 Blacksnsake	5.01	9/20/2018	\$242,500	1980	2,156	\$112.48	3/2	Drive	1.5
Not	1201 Abernathy	27.00	5/3/2018	\$390,000	1970	2,190	\$178.08	3/2	Crprt	Br/Rnch

Adjoining Residential Sales After Solar Farm Approved					Adjoining Sales Adjusted								
Solar	Address	Acres	Date Sold	Sales Price	Time	YB	Acres	GLA	BR/BA	Park	Other	Total	% Diff
Adjoins	215 Mariposa	17.74	12/12/2017	\$249,000								\$249,000	
Not	249 Mariposa	0.48	3/1/2019	\$153,000	-\$5,583	-\$17,136	\$129,450	-\$20,576	-\$10,000			\$229,154	8%
Not	110 Airport	0.83	5/10/2016	\$166,000	\$7,927	-\$4,648	\$126,825	-\$47,078	-\$10,000			\$239,026	4%
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	-\$5,621	-\$37,345	\$95,475	-\$68,048	-\$10,000	\$5,000		\$221,961	11%
Not	1201 Abernathy	27.00	5/3/2018	\$390,000	-\$4,552	-\$32,760	-\$69,450	-\$60,705	-\$10,000			\$212,533	15%
												Average	9%

The average difference after adjusting for all factors is +9% on average, which suggests an enhancement due to the solar farm across the street. Given the large adjustments for acreage and size, I will focus on the low end of the adjusted range at 4%, which is within the typical deviation and therefore suggests no impact on value.

I have also considered Parcel 4 that sold after the solar farm was approved but before it had been constructed in 2016.

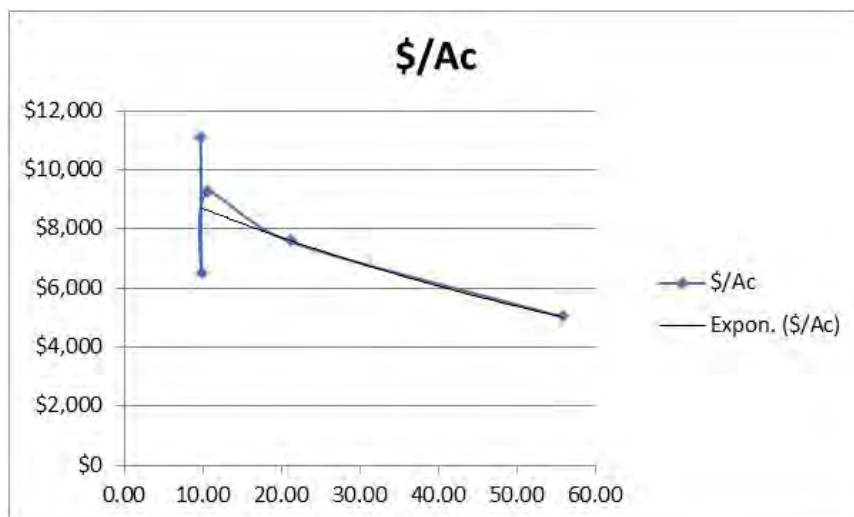
Adjoining Residential Sales After Solar Farm Approved												
Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	
Adjoins	242 Mariposa	2.91	9/21/2015	\$180,000	1962	1,880	\$95.74	3/2	Carport	Br/Rnch	Det Wrkshop	
Not	249 Mariposa	0.48	3/1/2019	\$153,000	1974	1,792	\$85.38	4/2	Garage	Br/Rnch		
Not	110 Airport	0.83	5/10/2016	\$166,000	1962	2,165	\$76.67	3/2	Crprt	Br/Rnch		
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	1980	2,156	\$112.48	3/2	Drive	1.5		

Adjoining Residential Sales After Solar Farm Approved					Adjoining Sales Adjusted								
Solar	Address	Acres	Date Sold	Sales Price	Time	YB	Acres	GLA	BR/BA	Park	Other	Total	% Diff
Adjoins	242 Mariposa	2.91	9/21/2015	\$180,000								\$180,000	
Not	249 Mariposa	0.48	3/1/2019	\$153,000	-\$15,807	-\$12,852	\$18,468	\$7,513		-\$3,000	\$25,000	\$172,322	4%
Not	110 Airport	0.83	5/10/2016	\$166,000	-\$3,165	\$0	\$15,808	-\$28,600			\$25,000	\$175,043	3%
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	-\$21,825	-\$30,555	-\$15,960	-\$40,942		\$2,000	\$25,000	\$160,218	11%
												Average	6%

The average difference after adjusting for all factors is +6%, which is again suggests a mild increase in value due to the adjoining solar farm use. The median is a 4% adjustment, which is within a standard deviation and suggests no impact on property value.

I have also considered the recent sale of Parcel 13 that is located on Blacksnake Road south of the project. I was unable to find good land sales in the same 20 acre range, so I have considered sales of larger and smaller acreage. I adjusted each of those land sales for time. I then applied the price per acre to a trendline to show where the expected price per acre would be for 20 acres. As can be seen in the chart below, this lines up exactly with the purchase of the subject property. I therefore conclude that there is no impact on Parcel 13 due to proximity to the solar farm.

Adjoining Residential Land Sales After Solar Farm Approved						Adjoining Sales Adjusted	
Solar	Tax/Street	Acres	Date Sold	Sales Price	\$/Ac	Time	\$/Ac
Adjoins	174339/Blacksnake	21.15	6/29/2018	\$160,000	\$7,565		\$7,565
Not	227852/Abernathy	10.57	5/9/2018	\$97,000	\$9,177	\$38	\$9,215
Not	17443/Legion	9.87	9/7/2018	\$64,000	\$6,484	-\$37	\$6,447
Not	164243/Alexis	9.75	2/1/2019	\$110,000	\$11,282	-\$201	\$11,081
Not	176884/Bowden	55.77	6/13/2018	\$280,000	\$5,021	\$7	\$5,027

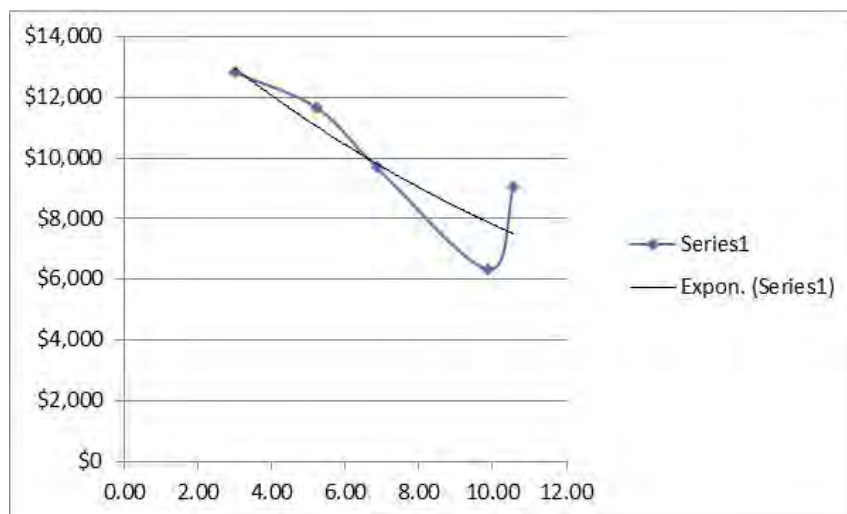


Finally, I have considered the recent sale of Parcel 17 that sold as vacant land. I was unable to find good land sales in the same 7 acre range, so I have considered sales of larger and smaller acreage. I adjusted each of those land sales for time. I then applied the price per acre to a trendline to show where the expected price per acre would be for 7 acres. As can be seen in the chart below, this lines up with the trendline running right through the purchase price for the subject property. I therefore conclude that there is no impact on Parcel 13 due to proximity to the solar farm. I note that this property was improved with a 3,196 square foot ranch built in 2018 following the land purchase, which shows that development near the solar farm was unimpeded.

Adjoining Residential Land Sales After Solar Farm Approved

Adjoining Sales Adjusted

Solar	Tax/Street	Acres	Date Sold	Sales Price	\$/Ac	Time	Location	\$/Ac
Adjoins	227039/Mariposa	6.86	12/6/2017	\$66,500	\$9,694			\$9,694
Not	227852/Abernathy	10.57	5/9/2018	\$97,000	\$9,177	-\$116		\$9,061
Not	17443/Legion	9.87	9/7/2018	\$64,000	\$6,484	-\$147		\$6,338
Not	177322/Robinson	5.23	5/12/2017	\$66,500	\$12,715	\$217	-\$1,272	\$11,661
Not	203386/Carousel	2.99	7/13/2018	\$43,500	\$14,548	-\$262	-\$1,455	\$12,832



24. Matched Pair – Clarke County Solar, Clarke County, VA



This project is a 20 MW facility located on a 234-acre tract that was built in 2017.

I have considered a recent sale of Parcel 3. The home on this parcel is 1,230 feet from the closest panel as measured in the second map from Google Earth, which shows the solar farm under construction.

I've compared this home sale to a number of similar rural homes on similar parcels as shown below. I have used multiple sales that bracket the subject property in terms of sale date, year built, gross living area, bedrooms and bathrooms. Bracketing the parameters insures that all factors are well balanced out in the adjustments. The trend for these sales shows a positive value for the adjacency to the solar farm.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	833 Nations Spr	5.13	1/9/2017	\$295,000	1979	1,392	\$211.93	3/2	Det Gar	Ranch	Unfin bsmt
Not	85 Ashby	5.09	9/11/2017	\$315,000	1982	2,333	\$135.02	3/2	2 Gar	Ranch	
Not	541 Old Kitchen	5.07	9/9/2018	\$370,000	1986	3,157	\$117.20	4/4	2 Gar	2 story	
Not	4174 Rockland	5.06	1/2/2017	\$300,000	1990	1,688	\$177.73	3/2	3 Gar	2 story	
Not	400 Sugar Hill	1.00	6/7/2018	\$180,000	1975	1,008	\$178.57	3/1	Drive	Ranch	

Adjoining Residential Sales After Solar Farm Approved

Adjoining Residential Sales After Solar Farm Approved				Adjoining Sales Adjusted										
Solar	Address	Acres	Date Sold	Sales Price	Time	Acres	YB	GLA	BR/BA	Park	Other	Total	% Diff	
Adjoins	833 Nations Spr	5.13	1/9/2017	\$295,000								\$295,000		
Not	85 Ashby	5.09	9/11/2017	\$315,000	-\$6,300			-\$6,615	-\$38,116		-\$7,000	\$15,000	\$271,969	8%
Not	541 Old Kitchen	5.07	9/9/2018	\$370,000	-\$18,500			-\$18,130	-\$62,057		-\$7,000	\$15,000	\$279,313	5%
Not	4174 Rockland	5.06	1/2/2017	\$300,000				-\$23,100	-\$15,782		-\$12,000	\$15,000	\$264,118	10%
Not	400 Sugar Hill	1.00	6/7/2018	\$180,000	-\$9,000	\$43,000	\$5,040	\$20,571	\$10,000	\$3,000	\$15,000	\$267,611	9%	
												Average	8%	

25. Matched Pair – Flemington Solar, Flemington, NJ



This solar farm is located off Kuhl Road and is south of Hart Boulevard. I spoke with Gerry Giles a local realtor who is familiar with the adjoining neighborhood as she has lived in that neighborhood. She indicated that in her opinion the adjoining solar farm is a quiet neighbor and would not have a negative impact on property value.

Furthermore, I spoke with her specifically about the recent sale of 10 Coventry, which I have included in the matched pairs. She noted that the seller was a divorced bachelor who had set the place up like a dorm and that it showed terribly. She believes proper staging of the interior would have significantly improved the sales price on this home. I adjusted for that factor in the comparables in that analysis based on that information.

I have identified four recent sales of homes adjoining this subdivision along Hart Boulevard and the side streets off of Hart Boulevard.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
8	Adjoins	10 Coventry	0.36	3/19/2018	\$370,000	1986	1,829	\$202.30	3/2.5	2-Gar	2-Story	Staging
	Not	58 Wellington	0.45	6/8/2018	\$334,500	1984	1,757	\$190.38	3/2.5	2-Gar	2-Story	
	Not	28 Bristol	0.35	1/17/2018	\$398,000	1985	1,757	\$226.52	3/2.5	2-Gar	2-Story	
	Not	1 Sheffield	0.35	12/15/2017	\$399,900	1984	1,870	\$213.85	4/2.5	2-Gar	2-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$370,000			295
-\$2,283	\$3,345	\$8,224			-\$10,035	\$333,751	10%		
\$2,046	\$1,990	\$9,786			-\$11,940	\$399,882	-8%		
\$3,168	\$3,999	-\$5,261			-\$11,997	\$389,809	-5%	-1%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
14	Adjoins	54 Hart	0.36	7/25/2016	\$420,000	1986	2,680	\$156.72	4/2.5	2-Gar	2-Story	
	Not	43 Aberdeen	0.36	11/21/2016	\$417,000	1987	2,524	\$165.21	4/2.5	2-Gar	2-Story	
	Not	42 Aberdeen	0.34	2/7/2017	\$454,900	1988	2,734	\$166.39	5/3	2-Gar	2-Story	
	Not	18 Aberdeen	0.34	11/6/2017	\$437,500	1988	2,687	\$162.82	4/2.5	2-Gar	2-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$420,000			375
-\$4,182	-\$2,085	\$15,464				\$426,197	-1%		
-\$7,552	-\$4,549	-\$5,391	-\$5,000			\$432,408	-3%		
-\$17,291	-\$4,375	-\$684				\$415,150	1%	-1%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
16	Adjoins	6 Portsmouth	0.36	6/19/2015	\$410,000	1991	2,687	\$152.59	4/2.5	2-Gar	2-Story	
	Not	43 Aberdeen	0.36	11/21/2016	\$417,000	1987	2,524	\$165.21	4/2.5	2-Gar	2-Story	
	Not	42 Aberdeen	0.34	2/7/2017	\$454,900	1988	2,734	\$166.39	5/3	2-Gar	2-Story	
	Not	18 Aberdeen	0.34	11/6/2017	\$437,500	1988	2,687	\$162.82	4/2.5	2-Gar	2-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$410,000			425
-\$18,308	\$8,340	\$16,158				\$423,190	-3%		
-\$22,962	\$6,824	-\$4,692	-\$5,000			\$429,069	-5%		
-\$32,112	\$6,563	\$0				\$411,950	0%	-3%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
19	Adjoins	12 Stratford	0.55	11/30/2017	\$414,900	1991	1,828	\$226.97	3/2.5	2-Gar	2-Story	
	Not	58 Wellington	0.45	6/8/2018	\$334,500	1984	1,757	\$190.38	3/2.5	2-Gar	2-Story	
	Not	28 Bristol	0.35	1/17/2018	\$398,000	1985	1,757	\$226.52	3/2.5	2-Gar	2-Story	
	Not	1 Sheffield	0.35	12/15/2017	\$399,900	1984	1,870	\$213.85	4/2	Gar	2-Story	

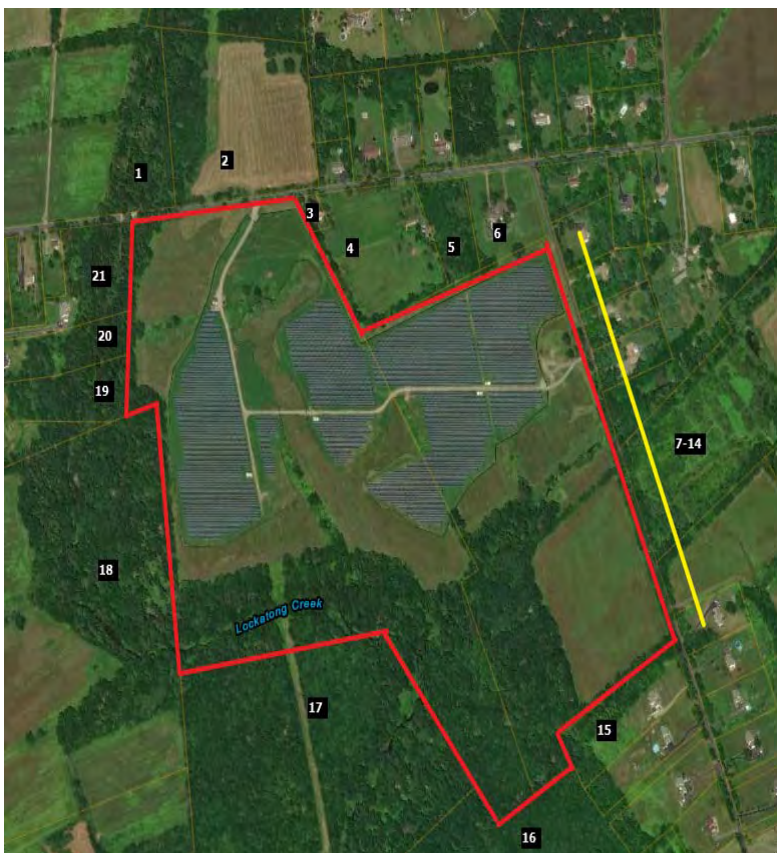
Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$414,900			345
-\$5,356	\$11,708	\$8,110				\$348,962	16%		
-\$1,610	\$11,940	\$9,650				\$417,980	-1%		
-\$505	\$13,997	-\$5,389	\$5,000	\$7,000		\$420,002	-1%	5%	

The range of impact identified by these matched pairs ranges are therefore -3% to +5% for distances ranging from 295 feet to 425 feet with an average difference from these four indicators of 0%. As noted earlier this range is within the typical plus or minus for any real estate transaction and indicates no impact on property value.

The broker Gerry Giles indicated that she has not seen the solar farm having any impact on adjoining property value. She noted that the solar farm is visible from Hart Boulevard and from a number of these backyards, but is still heavily screened.

26. Matched Pair – Frenchtown Solar, Frenchtown, NJ



This solar farm is located off Muddy Run Road. I spoke with Gerry Giles a local realtor who helped a buyer purchase 5 Muddy Town Road. She indicated that his home adjoining the solar farm had multiple offers and that most of those offers were higher than the offer she presented, but her buyer provided an all cash offer. This was important as the property was being purchased while the septic system required repairs and updates that the seller paid for but completed the work during/after the purchase. The solar farm was not considered a negative by her buyer.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
7	Adjoins	5 Muddy Run	2.14	6/23/2017	\$385,000	1985	2,044	\$188.36	4/2.5	2-Gar	2-Story	Updated
	Not	319 Barbertown	2.00	5/21/2019	\$358,000	1988	2,240	\$159.82	4/3	Gar	2-Story	
	Not	132 Kingwood	3.17	10/31/2016	\$380,000	1996	2,392	\$158.86	3/2.5	Det 2	2-Story	
	Not	26 Barbertown	2.03	5/21/2019	\$360,000	1998	2,125	\$169.41	4/3	2-Gar	2-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$385,000			250
-\$13,673	-\$5,370	-\$18,795	-\$5,000	\$10,000	\$20,000	\$345,162	10%		
\$4,893	-\$20,900	-\$33,171		\$5,000	\$20,000	\$355,823	8%		
-\$13,749	-\$23,400	-\$8,233	-\$5,000		\$20,000	\$329,618	14%		
								11%	

After typical adjustments including a \$20,000 increase in the comparable sales for updates, the subject property is showing a significant premium that may be attributable to the adjoining solar farm.

27. Matched Pair – McGraw Solar, East Windsor, NJ



This solar farm is located off Oak Creek Road. The matched pairs considered at this solar farm involve the townhome/duplexes located off Wyndmoor Drive and a single family home off Wilmor Drive.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
	Adjoins	153 Wyndmoor	N/A	4/25/2017	\$215,000	1987	1,532	\$140.34	3/3	Gar	2-Story
	Not	164 Wyndmoor	N/A	5/13/2019	\$258,000	1987	1,532	\$168.41	3/3	Gar	2-Story
	Not	33 Monroe	N/A	2/6/2018	\$261,000	1987	1,532	\$170.37	3/3	Gar	2-Story
	Not	20 Spyglass	N/A	12/19/2017	\$240,000	1987	1,532	\$156.66	3/3	Gar	2-Story

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$215,000			175
-\$15,862	\$0	\$0				\$242,138	-13%		
-\$6,157	\$0	\$0				\$254,843	-19%		
-\$4,695	\$0	\$0				\$235,305	-9%	-14%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
	Adjoins	149 Wyndmoor	N/A	5/24/2017	\$206,000	1987	1,236	\$166.67	2/1.5	Gar	2-Story
	Not	97 Wyndmoor	N/A	4/17/2017	\$210,000	1987	1,236	\$169.90	2/1.5	Gar	2-Story
	Not	24 Monroe	N/A	12/23/2016	\$217,979	1987	1,560	\$139.73	3/2.5	Gar	2-Story
	Not	81 Wyndmoor	N/A	1/31/2018	\$204,000	1987	1,254	\$162.68	2/2.5	Gar	2-Story

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$206,000			175
\$639	\$0	\$0				\$210,639	-2%		
\$2,723	\$0	-\$27,164				\$193,539	6%		
-\$4,225	\$0	-\$1,757				\$198,018	4%	3%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
	Adjoins	26 Wilmor	0.46	3/19/2019	\$286,000	1961	1,092	\$261.90	3/1.5	Gar	Ranch
	Not	25 Pinehurst	0.48	5/17/2019	\$315,000	1967	1,314	\$239.73	3/1&2	Gar	Ranch
	Not	15 Maple Stream	0.40	6/6/2017	\$285,000	1964	1,202	\$237.10	3/1.5	Gar	Ranch
	Not	3 Amy	0.29	10/11/2018	\$286,000	1969	1,229	\$232.71	3/1.5	Gar	Ranch

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$286,000			400
-\$1,566	-\$9,450	-\$31,932	-\$5,000			\$267,052	7%		
\$15,635	-\$4,275	-\$15,649				\$280,711	2%		
\$3,832	-\$11,440	-\$19,129				\$259,263	9%	6%	
						Average		-2%	250

The range of impact identified by these matched pairs ranges are therefore -14% to +6% for distances ranging from 175 feet to 400 feet with an average difference from these three indicators of -2%. As noted earlier this range is within the typical plus or minus for any real estate transaction and indicates no impact on property value.

This set of matched pairs is interesting and there appears to be more going on when you compare the two townhome properties. One shows a significant discount and the other shows no impact. When I compare the two townhomes that both back up to the same solar farm, the townhome that includes 1,532 s.f. sold for only \$9,000 more than the townhome that has 1,236 s.f. I attempted to speak with the broker involved with these but was unable to get a reply. The difference there strongly indicates that something else is going on with the larger townhome. I will not rely heavily on that matched pair, but I have included it to be complete.

28. Matched Pair – Tinton Falls Solar, Tinton Falls, NJ



This solar farm is located off W. Park Avenue. The tract with the solar farm also has a condo/townhome project from which I have considered recent sales activity. I note that the developer of the solar farm and the townhome community clearly did not see any negative impact from the combined use. These units are still being constructed with new sales expected in the near future.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	111 Kyle	N/A	8/8/2018	\$402,000	2015	2,200	\$182.73	3/2.5	Gar	3-Story	End
	Not	80 Kyle	N/A	9/18/2017	\$410,000	2015	2,226	\$184.19	2/2.5	Gar	3-Story	End/Park
	Not	15 Michael	N/A	9/19/2018	\$412,000	2016	2,157	\$191.01	3/2.5	Gar	3-Story	End
	Not	31 Michael	N/A	4/1/2019	\$390,000	2016	2,200	\$177.27	3/2.5	Gar	3-Story	End
	Not	15 Michael	N/A	9/9/2018	\$412,000	2016	2,157	\$191.01	3/2.5	Gar	3-Story	End

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$402,000			185
\$11,194	\$0	-\$2,873			-\$20,500	\$397,821	1%		
-\$1,458	-\$2,060	\$4,928				\$413,410	-3%		
-\$7,756	-\$1,950	\$0				\$380,294	5%		
-\$1,111	-\$2,060	\$4,928				\$413,757	-4%		

1%

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	47 Kyle	N/A	8/31/2018	\$260,000	2016	1,140	\$228.07	2/2	Gar	3-Story	End
	Not	26 Jake	N/A	10/31/2017	\$268,000	2014	1,140	\$235.09	2/2	Gar	3-Story	End
	Not	4 Michael	N/A	11/8/2018	\$260,000	2015	1,140	\$228.07	2/2	Gar	3-Story	End
	Not	36 Kyle	N/A	1/10/2019	\$260,000	2015	1,140	\$228.07	2/2	Gar	3-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$260,000			155
\$6,866	\$2,680	\$0				\$277,546	-7%		
-\$1,512	\$1,300	\$0				\$259,788	0%		
-\$2,892	\$1,300	\$0			\$7,800	\$266,208	-2%	-3%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	7 Kyle	N/A	6/15/2017	\$262,195	2017	1,140	\$230.00	2/2	Gar	3-Story	End
	Not	26 Jake	N/A	10/31/2017	\$268,000	2014	1,140	\$235.09	2/2	Gar	3-Story	End
	Not	4 Michael	N/A	11/8/2018	\$260,000	2015	1,140	\$228.07	2/2	Gar	3-Story	End
	Not	36 Kyle	N/A	1/10/2019	\$260,000	2015	1,140	\$228.07	2/2	Gar	3-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$262,195			150
-\$3,117	\$4,020	\$0				\$268,903	-3%		
-\$11,196	\$2,600	\$0	-\$5,000			\$246,404	6%		
-\$12,576	\$2,600	\$0			\$7,800	\$257,824	2%	2%	

Adjoining Residential Sales After Solar Farm Approved

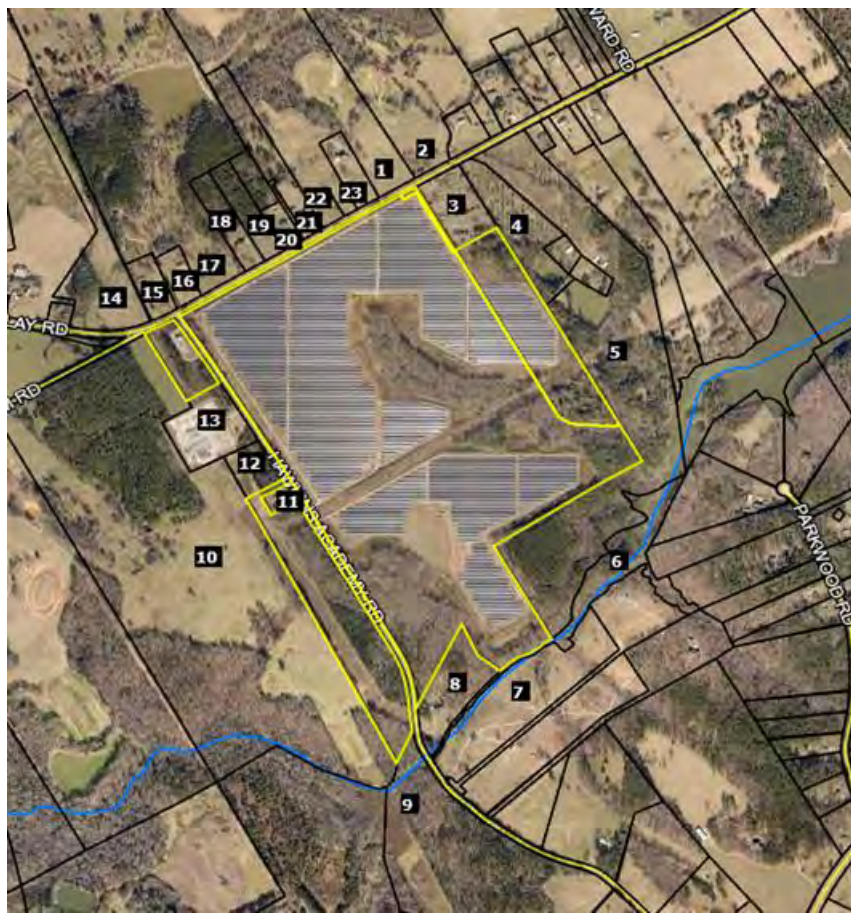
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	1 Samantha	N/A	9/1/2017	\$258,205	2017	1,140	\$226.50	2/2	Gar	3-Story	End
	Not	26 Jake	N/A	10/31/2017	\$268,000	2014	1,140	\$235.09	2/2	Gar	3-Story	End
	Not	4 Michael	N/A	11/8/2018	\$260,000	2015	1,140	\$228.07	2/2	Gar	3-Story	End
	Not	36 Kyle	N/A	1/10/2019	\$260,000	2015	1,140	\$228.07	2/2	Gar	3-Story	

Adjoining Sales Adjusted

Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
						\$258,205			155
-\$1,355	\$4,020	\$0	-\$5,000			\$265,665	-3%		
-\$9,487	\$2,600	\$0				\$253,113	2%		
-\$10,867	\$2,600	\$0			\$7,800	\$259,533	-1%	0%	

The range of impact identified by these matched pairs ranges are therefore -3% to +2% for distances ranging from 150 feet to 185 feet with an average difference from these four indicators of 0%. As noted earlier this range is within the typical plus or minus for any real estate transaction and indicates no impact on property value.

29. Matched Pair – Simon Solar, Social Circle, GA



This solar farm is located off Hawkins Academy Road and Social Circle Fairplay Road. I identified three adjoining sales to this tract after development of the solar farm. However, one of those is shown as Parcel 12 in the map above and includes a powerline easement encumbering over a third of the 5 acres and adjoins a large substation as well. It would be difficult to isolate those impacts from any potential solar farm impact and therefore I have excluded that sale. I also excluded the recent sale of Parcel 17, which is a farm with conservation restrictions on it that similarly would require a detailed examination of those conservation restrictions in order to see if there was any impact related to the solar farm. I therefore focused on the recent sale of Parcel 7 and the adjoining parcel to the south of that. They are technically not adjoining due to the access road for the flag-shaped lot to the east. Furthermore, there is an apparent access easement serving the two rear lots that encumber these two parcels which is a further limitation on these sales. This analysis assumes that the access easement does not negatively impact the subject property, though it may.

Adjoining Land Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	\$/AC	Type	Other
7+	Adjoins	4514 Hawkins	36.86	3/31/2016	\$180,000	\$4,883	Pasture	Esmts
	Not	HD Atha	69.95	12/20/2016	\$357,500	\$5,111	Wooded	N/A
	Not	Pannell	66.94	11/8/2016	\$322,851	\$4,823	Mixed	*
	Not	1402 Roy	123.36	9/29/2016	\$479,302	\$3,885	Mixed	**

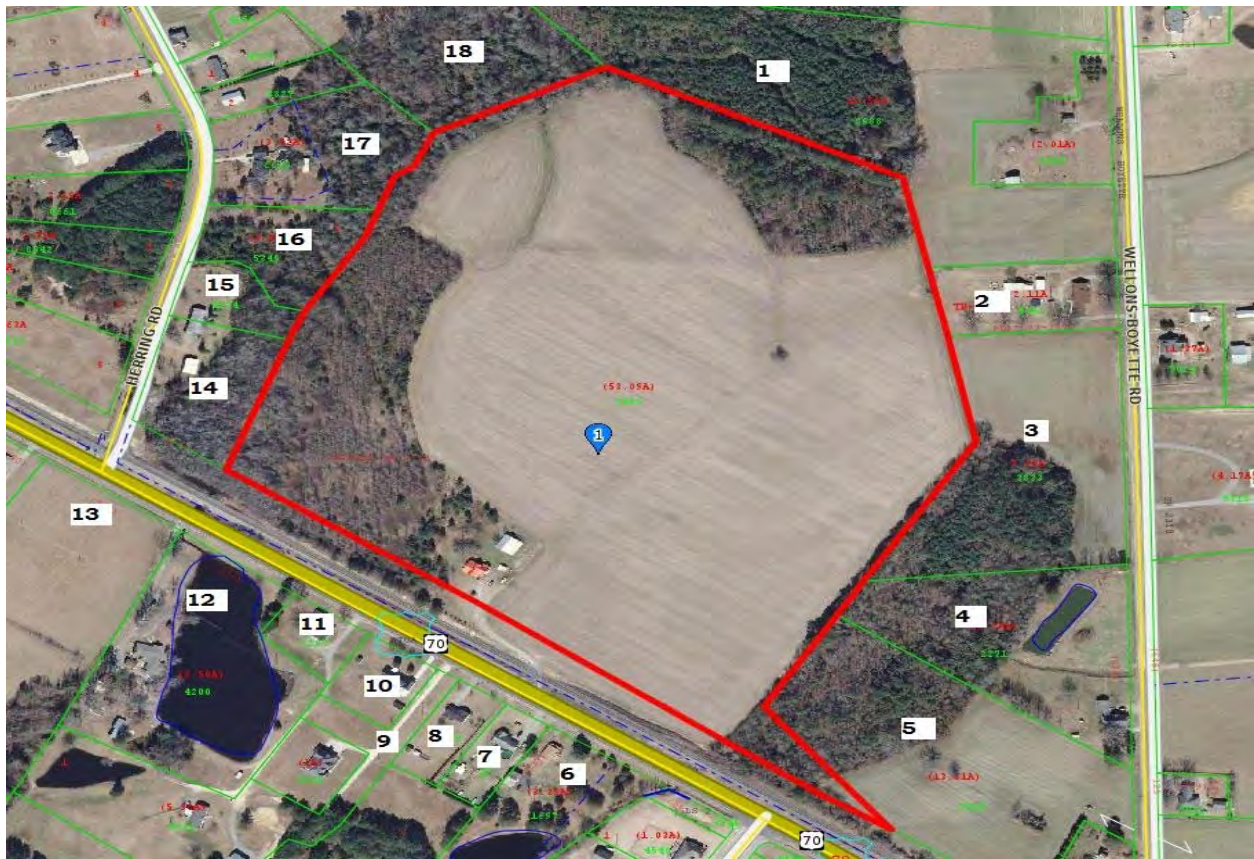
* Adjoining 1 acre purchased by same buyer in same deed. Allocation assigned on the County Tax Record.

** Dwelling built in 1996 with a 2016 tax assessed value of \$75,800 deducted from sales price to reflect land value

Adjoining Sales Adjusted						Avg
Time	Size	Type	Other	Total/Ac	% Diff	% Diff
				\$4,883		
\$89	\$256			\$5,455	-12%	
-\$90	\$241			\$4,974	-2%	
-\$60	\$389			\$4,214	14%	
						0%

The range of impact identified by these matched pairs ranges are therefore -12% to +14% for with an average of 0%. The best matched pair with the least adjustment supports a -2% impact due to the solar farm. I note again that this analysis considers no impact for the existing access easements that meander through this property and it may be having an impact. Still at -2% impact as the best indication for the solar farm, I consider that to be no impact given that market fluctuations support +/- 5%.

30. Matched Pair – Candace Solar, Princeton, NC



This solar farm is located at 4839 US 70 Highway just east of Herring Road. This solar farm was completed on October 25, 2016.

I identified three adjoining sales to this tract after development of the solar farm with frontage on US 70. I did not attempt to analyze those sales as they have exposure to an adjacent highway and railroad track. Those homes are therefore problematic for a matched pair analysis unless I have similar homes fronting on a similar corridor.

I did consider a land sale and a home sale on adjoining parcels without those complications.

The lot at 499 Herring Road sold to Paradise Homes of Johnston County of NC, Inc. for \$30,000 in May 2017 and a modular home was placed there and sold to Karen and Jason Toole on September 29, 2017. I considered the lot sale first as shown below and then the home sale that followed.

Adjoining Land Sales After Solar Farm Approved					Adjoining Sales Adjusted						
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Other	Time	Site	Other	Total	% Diff
16	Adjoins	499 Herring	2.03	5/1/2017	\$30,000					\$30,000	
	Not	37 Becky	0.87	7/23/2019	\$24,500	Sub/Pwr	-\$1,679	\$4,900		\$27,721	8%
	Not	5858 Bizzell	0.88	8/17/2016	\$18,000		\$390	\$3,600		\$21,990	27%
	Not	488 Herring	2.13	12/20/2016	\$35,000		\$389			\$35,389	-18%
Average											5%

Following the land purchase, the modular home was placed on the site and sold. I have compared this modular home to the following sales to determine if the solar farm had any impact on the purchase price.

Adjoining Residential Sales After Solar Farm Approved												
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
16	Adjoins	499 Herring	2.03	9/27/2017	\$215,000	2017	2,356	\$91.26	4/3	Drive	Modular	
	Not	678 WC	6.32	3/8/2019	\$226,000	1995	1,848	\$122.29	3/2.5	Det Gar	Mobile	Ag bldgs
	Not	1810 Bay V	8.70	3/26/2018	\$170,000	2003	2,356	\$72.16	3/2	Drive	Mobile	Ag bldgs
	Not	1795 Bay V	1.78	12/1/2017	\$194,000	2017	1,982	\$97.88	4/3	Drive	Modular	

Adjoining Residential Sales Af Adjoining Sales Adjusted													
Parcel	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
16	Adjoins	499 Herring								\$215,000			488
	Not	678 WC	-\$10,037	-\$25,000	\$24,860	\$37,275	-\$5,000	-\$7,500	-\$20,000	\$220,599	-3%		
	Not	1810 Bay V	-\$2,579	-\$20,000	\$11,900	\$0				\$159,321	26%		
	Not	1795 Bay V	-\$1,063		\$0	\$21,964				\$214,902	0%		
Average												8%	

The best comparable is 1795 Bay Valley as it required the least adjustment and was therefore most similar, which shows a 0% impact. This signifies no impact related to the solar farm.

The range of impact identified by these matched pairs ranges are therefore -3% to +26% with an average of +8% for the home and an average of +4% for the lot, though the best indicator for the lot shows a \$5,000 difference in the lot value due to the proximity to the solar farm or a -12% impact.

31. Matched Pair – Crittenden Solar, Crittenden, KY



This solar farm was built in December 2017 on a 181.70-acre tract but utilizing only 34.10 acres. This is a 2.7 MW facility with residential subdivisions to the north and south.

I have identified four home sales to the north of this solar farm on Claiborne Drive and one home sale to the south on Eagle Ridge Drive since the completion of this solar farm. The home sale on Eagle Drive is for a \$75,000 home and all of the homes along that street are similar in size and price range. According to local broker Steve Glacken with Cutler Real Estate these are the lowest price range/style home in the market. I have not analyzed that sale as it would unlikely provide significant data to other homes in the area.

Mr. Glacken is currently selling lots at the west end of Claiborne for new home construction. He indicated that the solar farm near the entrance of the development has been a complete non-factor and none of the home sales are showing any concern over the solar farm. Most of the homes are in the \$250,000 to \$280,000 price range on lots being marketed for \$28,000 to \$29,000.

The first home considered is a bit of an anomaly for this subdivision in that it is the only manufactured home that was allowed in the community. It sold on January 3, 2019. I compared that sale to three other manufactured home sales in the area making minor adjustments as shown on the next page to account for the differences. After all other factors are considered the adjustments show a -1% to +13% impact due to the adjacency of the solar farm. The best indicator is 1250 Cason, which shows a 3% impact. A 3% impact is within the normal static of real estate transactions and therefore not considered indicative of a positive impact on the property, but it strongly supports an indication of no negative impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	250 Claiborne	0.96	1/3/2019	\$120,000	2000	2,016	\$59.52	3/2	Drive	Manuf	
	Not	1250 Cason	1.40	4/18/2018	\$95,000	1994	1,500	\$63.33	3/2	2-Det	Manuf	Carport
	Not	410 Reeves	1.02	11/27/2018	\$80,000	2000	1,456	\$54.95	3/2	Drive	Manuf	
	Not	315 N Fork	1.09	5/4/2019	\$107,000	1992	1,792	\$59.71	3/2	Drive	Manuf	

Adjustments											Avg	
Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
Adjoins	250 Claiborne								\$120,000			373
Not	1250 Cason	\$2,081		\$2,850	\$26,144		-\$5,000	-\$5,000	\$116,075	3%		
Not	410 Reeves	\$249		\$0	\$24,615				\$104,865	13%		
Not	315 N Fork	-\$1,091		\$4,280	\$10,700				\$120,889	-1%		
											5%	

I also looked at three other home sales on this street as shown below. These are stick-built homes and show a higher price range.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	300 Claiborne	1.08	9/20/2018	\$213,000	2003	1,568	\$135.84	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	\$229,000	2007	1,446	\$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	Ranch	Brick
	Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Adjustments											Avg	
Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
Adjoins	300 Claiborne								\$213,000			488
Not	460 Claiborne	-\$2,026		-\$4,580	\$15,457	\$5,000			\$242,850	-14%		
Not	2160 Sherman	-\$5,672		-\$2,650	-\$20,406				\$236,272	-11%		
Not	215 Lexington	\$1,072		\$3,468	-\$2,559	-\$5,000			\$228,180	-7%		
											-11%	

This set of matched pairs shows a minor negative impact for this property. I was unable to confirm the sales price or conditions of this sale. The best indication of value is based on 215 Lexington, which required the least adjusting and supports a -7% impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	350 Claiborne	1.00	7/20/2018	\$245,000	2002	1,688	\$145.14	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	\$229,000	2007	1,446	\$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Adjustments											Avg	
Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
Adjoins	350 Claiborne								\$245,000			720
Not	460 Claiborne	-\$3,223		-\$5,725	\$30,660	\$5,000			\$255,712	-4%		
Not	2160 Sherman	-\$7,057		-\$3,975	-\$5,743				\$248,225	-1%		
Not	215 Lexington	-\$136		\$2,312	\$11,400	-\$5,000			\$239,776	2%		
											-1%	

This set of matched pairs shows a no negative impact for this property. The range of adjusted impacts is -4% to +2%. The best indication is -1%, which as described above is within the typical market static and supports no impact on adjoining property value.

Adjoining Residential Sales After Solar Farm Approved

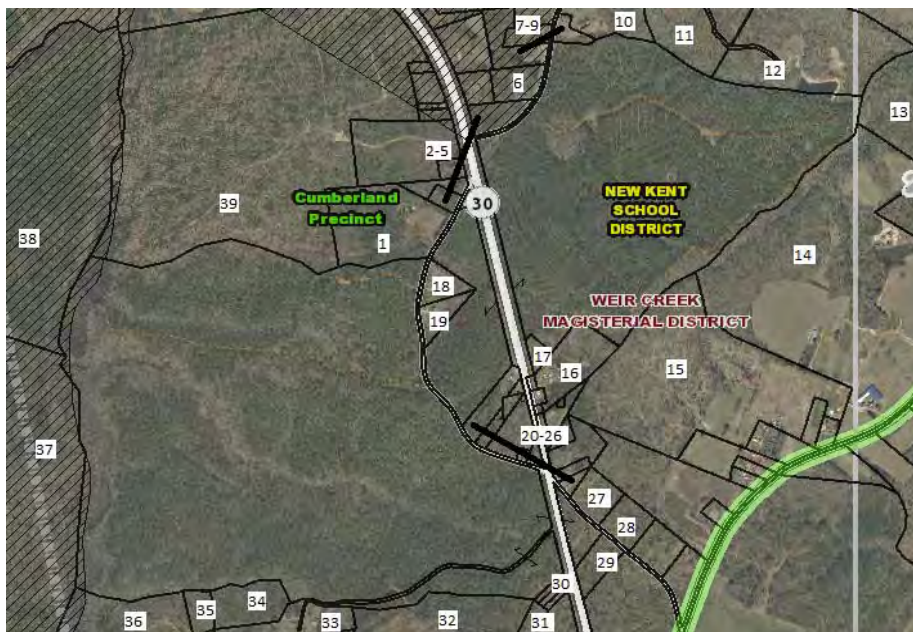
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	370 Claiborne	1.06	8/22/2019	\$273,000	2005	1,570	\$173.89	4/3	2-Car	2-Story	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	2290 Dry	1.53	5/2/2019	\$239,400	1988	1,400	\$171.00	3/2.5	2-Car	R/FBsmt	Brick
	Not	125 Lexington	1.20	4/17/2018	\$240,000	2001	1,569	\$152.96	3/3	2-Car	Split	Brick

Adjustments											Avg	
Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
Adjoins	370 Claiborne								\$273,000			930
Not	2160 Sherman	\$1,831		\$0	-\$20,161				\$246,670	10%		
Not	2290 Dry	\$2,260		\$20,349	\$23,256	\$2,500			\$287,765	-5%		
Not	125 Lexington	\$9,951		\$4,800					\$254,751	7%		
											4%	

This set of matched pairs shows a positive negative impact for this property. The range of adjusted impacts is -5% to +10%. The best indication is +7%. I typically consider measurements of +/-5% to be within the typical static of real estate transactions. This indication is higher than that and suggests a positive relationship.

The four matched pairs considered in this analysis includes two that show no impact on value, one that shows a negative impact on value, and one that shows a positive impact. The negative indication supported by one matched pair is -7% and the positive impact of another is +7%. The two neutral indications show impacts of -1% and +3%. The average indicated impact is +1% when all four of these indicators are blended.

32. Matched Pair – Walker-Correctional Solar, Barham Road, Barhamsville, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

I considered the recent sale identified on the map above as Parcel 19, which is directly across the street and based on the map shown on the following page is 250 feet from the closest panel. A limited buffering remains along the road with natural growth being encouraged, but currently the panels are visible from the road. Alex Uminski, SRA with MGMiller Valuations in Richmond VA confirmed this sale with the buying and selling broker. The selling broker indicated that the solar farm was not a negative influence on this sale and in fact the buyer noticed the solar farm and then discovered the listing. The privacy being afforded by the solar farm was considered a benefit by the buyer. I used a matched pair analysis with a similar sale nearby as shown below and found no negative impact on the sales price. Property actually closed for more than the asking price.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	5241 Barham	2.65	10/18/2018	\$264,000	2007	1,660	\$159.04	3/2	Drive	Ranch	Modular
Not	17950 New Kent	5.00	9/5/2018	\$290,000	1987	1,756	\$165.15	3/2.5	3 Gar	Ranch	
Not	9252 Ordinary	4.00	6/13/2019	\$277,000	2001	1,610	\$172.05	3/2	1.5-Gar	Ranch	
Not	2416 W Miller	1.04	9/24/2018	\$299,000	1999	1,864	\$160.41	3/2.5	Gar	Ranch	

Adjoining Sales Adjusted

Solar	Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
Adjoins	5241 Barham								\$264,000		250
Not	17950 New Kent		-\$8,000	\$29,000	-\$4,756	-\$5,000	-\$20,000	-\$15,000	\$266,244	-1%	
Not	9252 Ordinary	-\$8,310	-\$8,000	\$8,310	\$2,581		-\$10,000	-\$15,000	\$246,581	7%	
Not	2416 W Miller		\$8,000	\$11,960	-\$9,817	-\$5,000	-\$10,000	-\$15,000	\$279,143	-6%	

Average Diff 0%



I also spoke with Patrick W. McCrerey of Virginia Estates who was marketing a property that sold at 5300 Barham Road adjoining the Walker-Correctional Solar Farm. He indicated that this property was unique with a home built in 1882 and heavily renovated and updated on 16.02 acres. The solar farm was through the woods and couldn't be seen by this property and it had no impact on marketing this property. This home sold on April 26, 2017 for \$358,000. I did not set up any matched pairs for this property as it was such a unique property that any such comparison would be difficult to rely on. The broker's comments do support the assertion that the adjoining solar farm had no impact on value. The home in this case was 510 feet from the closest panel.

33. Matched Pair – Innovative Solar 46, Roslin Farm Rd, Hope Mills, NC



This project was built in 2016 and located on 532 acres for a 78.5 MW solar farm with the closest home at 125 feet from the closest solar panel with an average distance of 423 feet.

I considered the recent sale of a home on Roslin Farm Road just north of Running Fox Road as shown below. This sale supports an indication of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	6849 Roslin Farm	1.00	2/18/2019	\$155,000	1967	1,610	\$96.27	3/3	Drive	Ranch	Brick	435
Not	6592 Sim Canady	2.43	9/5/2017	\$185,000	1974	2,195	\$84.28	3/2	Gar	Ranch	Brick	
Not	1614 Joe Hall	1.63	9/3/2019	\$145,000	1974	1,674	\$86.62	3/2	Det Gar	Ranch	Brick	
Not	109 Bledsoe	0.68	1/17/2019	\$150,000	1973	1,663	\$90.20	3/2	Gar	Ranch	Brick	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	6849 Roslin Farm								\$155,000		5%
Not	6592 Sim Canady	\$8,278		-\$6,475	-\$39,444	\$10,000	-\$5,000		\$152,359	2%	
Not	1614 Joe Hall	-\$2,407		-\$5,075	-\$3,881	\$10,000	-\$2,500		\$141,137	9%	
Not	109 Bledsoe	\$404	\$10,000	-\$4,500	-\$3,346		-\$5,000		\$147,558	5%	

34. Matched Pair – Innovative Solar 42, County Line Rd, Fayetteville, NC



This project was built in 2017 and located on 413.99 acres for a 71 MW with the closest home at 135 feet from the closest solar panel with an average distance of 375 feet.

I considered the recent sales identified on the map above as Parcels 2 and 3, which is directly across the street these homes are 330 and 340 feet away. Parcel 2 includes an older home built in 1976, while Parcel 3 is a new home built in 2019. So the presence of the solar farm had no impact on new construction in the area.

The matched pairs for each of these are shown below followed by a more recent map showing the panels at this site.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	2923 County Ln	8.98	2/28/2019	\$385,000	1976	2,905	\$132.53	3/3	2-Car	Ranch	Brick/Pond	340
Not	1928 Shaw Mill	17.00	7/3/2019	\$290,000	1977	3,001	\$96.63	4/4	2-Car	Ranch	Brick/Pond/Rental	
Not	2109 John McM.	7.78	4/25/2018	\$320,000	1978	2,474	\$129.35	3/2	Det Gar	Ranch	Vinyl/Pool,Stable	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2923 County Ln								\$385,000		3%
Not	1928 Shaw Mill	-\$3,055	\$100,000	-\$1,450	-\$7,422	-\$10,000			\$368,074	4%	
Not	2109 John McM.	\$8,333		-\$3,200	\$39,023	\$10,000		\$5,000	\$379,156	2%	

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	2935 County Ln	1.19	6/18/2019	\$266,000	2019	2,401	\$110.79	4/3	Gar	2-Story		330
Not	3005 Hemingway	1.17	5/16/2019	\$269,000	2018	2,601	\$103.42	4/3	Gar	2-Story		
Not	7031 Glynn Mill	0.60	5/8/2018	\$255,000	2017	2,423	\$105.24	4/3	Gar	2-Story		
Not	5213 Bree Brdg	0.92	5/7/2019	\$260,000	2018	2,400	\$108.33	4/3	3-Gar	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2935 County Ln								\$266,000		3%
Not	3005 Hemingway	\$748		\$1,345	-\$16,547				\$254,546	4%	
Not	7031 Glynn Mill	\$8,724		\$2,550	-\$1,852				\$264,422	1%	
Not	5213 Bree Brdg	\$920		\$1,300	\$76			-\$10,000	\$252,296	5%	

Both of these matched pairs adjust to an average of +3% on impact for the adjoining solar farm, meaning there is a slight positive impact due to proximity to the solar farm. This is within the standard +/- of typical real estate transactions, which strongly suggests no impact on property value. I noted specifically that for 2923 County Line Road, the best comparable is 2109 John McMillan as it does not have the additional rental unit on it. I made no adjustment to the other sale for the value of that rental unit, which would have pushed the impact on that comparable downward – meaning there would have been a more significant positive impact.



35. Matched Pair – Demille Solar, Demille Road, Lapeer, MI



This solar farm is located on 160 acres of a parent tract assemblage of 311.40 acres with a 28.4 MW output. This was built in 2017.

I have identified several home sales adjoining this solar farm at the southeast corner where the red line shows adjoining Parcels 5 through 17 on the map above.

The first is Parcel 8 in the map above, 1120 Don Wayne Drive, that sold in August 2019. I have compared this to multiple home sales as shown below. I consider 1231 Turrill to be the best comparable of this set as it required the least adjustment and was the most similar in size, age, and date of sale.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Dist.
Adjoins	1120 Don Wayne	0.47	8/28/2019	\$194,000	1976	1,700	\$114.12	3/3.5	2-Car	Ranch	Brick/FinBsmt	310
Not	1127 Don Wayne	0.51	9/23/2019	\$176,900	1974	1,452	\$121.83	3/2	2-Car	Ranch	Brick/Ufin Bsmt	
Not	1231 Turrill	1.21	4/25/2019	\$182,000	1971	1,560	\$116.67	3/2	2-Car	Ranch	Brick/Wrkshp	
Not	1000 Baldwin	3.11	8/1/2017	\$205,000	1993	1,821	\$112.58	3/2.5	2-Car	Ranch	Vinyl	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	1120 Don Wayne								\$194,000		-1%
Not	1127 Don Wayne	-\$258		\$1,769	\$24,171	\$10,000			\$212,582	-10%	
Not	1231 Turrill	\$1,278	-\$10,000	\$4,550	\$13,067	\$10,000			\$200,895	-4%	
Not	1000 Baldwin	\$8,718	-\$20,000	-\$17,425	-\$10,897	\$10,000			\$175,396	10%	

Next I considered Parcel 9, 1126 Don Wayne Drive, which I have compared to two similar home sales nearby that are not adjoining a solar farm as shown below. This home sold in May 2018 after the solar farm was built.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Dist.
Adjoins	1126 Don Wayne	0.47	5/16/2018	\$160,000	1971	1,900	\$84.21	3/2.5	2-Car	Ranch	Brick,FinBsmt	310
Not	70 Sterling Dr	0.32	8/2/2018	\$137,500	1960	1,800	\$76.39	3/1.5	1-Car	Ranch	Brick	
Not	3565 Garden Dr	0.34	5/15/2019	\$165,000	1960	2,102	\$78.50	3/1.5	2-Car	Ranch	Brick	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	1126 Don Wayne								\$160,000		-3%
Not	70 Sterling Dr	-\$603		\$7,563	\$6,111	\$10,000	\$5,000		\$165,571	-3%	
Not	3565 Garden Dr	-\$3,374		\$9,075	-\$12,685	\$5,000			\$163,016	-2%	

Next I looked at Parcel 11, 1138 Don Wayne Drive, that sold in August 2019. I have compared this to three similar sales as shown below. I attributed no value to the pool at 1138 Don Wayne Drive.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Dist.
Adjoins	1138 Don Wayne	0.47	8/28/2019	\$191,000	1975	2,128	\$89.76	4/1.5	2-Car	2-Story	Brick	380
Not	1331 W Genessee	0.45	10/25/2019	\$160,707	1940	1,955	\$82.20	4/1.5	Drive	1.5 Story	Vinyl/UnBsmt	
Not	1128 Gwen Dr	0.47	8/24/2018	\$187,500	1973	2,040	\$91.91	3/2.5	2-Car	2 Story	Brick/UnBsmt	
Not	1227 Oakridge	1.05	6/11/2017	\$235,000	1980	2,500	\$94.00	4/2.5	2-Car	2 Story	Brk/PFinBsmt	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	1138 Don Wayne								\$191,000		-1%
Not	1331 W Genessee	-\$524		\$16,874	\$11,377		\$10,000		\$198,434	-4%	
Not	1128 Gwen Dr	\$3,887		\$1,875	\$6,471	-\$10,000			\$189,733	1%	
Not	1227 Oakridge	\$10,667	-\$10,000	-\$5,875	-\$27,974	-\$10,000			\$191,818	0%	

Parcel 13, 1168 Alice Drive, sold in October 2019. I spoke with Tanya Biernat the buyer's agent who handled that sale and she indicated that the property was placed on the market below market for a fast sale by the sellers. The buyers expressed no concern regarding the adjacent solar farm and it had no impact on marketing or selling the property, though it did sell for a low price. I also spoke with Chantel Fink's office, the selling agent. They confirmed that the solar farm was not an issue in the sales price or marketing of the property. Given that this sale was noted as below market for a fast sale, I have not attempted to set it up as a matched pair.

Parcel 14, 1174 Alice Drive, sold in January 2019. I have compared that sale to three similar properties as shown below. I included 1135 Gwen Drive as a nearby comparable, but it is not a good comparable. According to the broker, Paul Coulter, that home had many recent and significant upgrades that made it superior to similar housing in the neighborhood. It is notably the highest sales price in the neighborhood. I have shown that one but I made no adjustment for those upgrades, but I won't rely on that sale for the matched pairs. I consider the 1127 Don Wayne Drive comparable to be a more reasonable comparison. I spoke with Chris Ferguson the broker for that sale who confirmed that it was arm's length and that while across Don Wayne Drive from the homes that adjoin the solar farm, this home had no view of the solar farm and was not an issue in marketing this home.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Dist.
Adjoins	1174 Alice Dr	0.54	1/14/2019	\$165,000	1973	1,400	\$117.86	3/1.5	2-Car	Ranch	Brick/Fin Bsmt	280
Not	1127 Don Wayne	0.51	9/23/2019	\$176,900	1974	1,452	\$121.83	3/2	2-Car	Ranch	Brick/Ufin Bsmt	
Not	1135 Gwen Dr	0.43	7/26/2019	\$205,000	1967	1,671	\$122.68	3/2	2-Car	Ranch	Brick/Ufin Bsmt	
Not	1160 Beth Dr	0.46	6/20/2019	\$147,500	1970	1,482	\$99.53	4/1.5	2-Car	Ranch	Brick/Fin Bsmt	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	1174 Alice Dr								\$165,000		2%
Not	1127 Don Wayne	-\$2,504		-\$885	-\$5,068	-\$5,000			\$163,443	1%	
Not	1135 Gwen Dr	-\$2,223		\$6,150	-\$26,597	-\$5,000			\$177,330	-7%	
Not	1160 Beth Dr	-\$1,301		\$2,213	-\$6,529				\$141,883	14%	

The four matched pairs identified show a range of -3% to +2% based on the average difference for each set of matched pairs. This is a very similar range I have found in most sales adjoining solar farms and strongly supports the assertion that the solar farm is not having a negative impact on adjoining property values.

Furthermore, two brokers active in the sale of a home adjoining the solar farm both confirmed that Parcel 13 was not impacted by the presence of the solar farm on the adjacent tract.

36. Matched Pair – Turrill Solar, Turrill Road, Lapeer, MI



This solar farm is located on approximately 230 acres with a 19.6 MW output. This was built in 2017.

I have identified several home sales adjoining this solar farm on the west side of this solar farm on Cliff Drive.

The first is 1060 Cliff Drive that sold in September 2018. I compared this to multiple nearby home sales as shown below.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	1060 Cliff Dr	1.03	9/14/2018	\$200,500	1970	2,114	\$94.84	4/2.5	2-Car	2 Story	Brick	290
Not	1331 W Genessee	0.45	10/25/2019	\$160,707	1940	1,955	\$82.20	4/1.5	Drive	1.5 Story	Vinyl/Unfin Bsmt	
Not	1128 Gwen Dr	0.47	8/24/2018	\$187,500	1973	2,040	\$91.91	3/2.5	2-Car	2 Story	Brick/Unfin Bsmt	
Not	1227 Oakridge	1.05	6/11/2017	\$235,000	1980	2,500	\$94.00	4/2.5	2-Car	2 Story	Brk/Prt Fin Bsmt	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	1060 Cliff Dr								\$200,500		-2%
Not	1331 W Genessee	-\$3,666	\$10,000	\$14,464	\$10,456	\$10,000	\$10,000		\$211,961	-6%	
Not	1128 Gwen Dr	\$221	\$10,000	-\$2,813	\$5,441				\$200,350	0%	
Not	1227 Oakridge	\$6,073		-\$11,750	-\$29,027				\$200,296	0%	

Next I considered 1040 Cliff Drive as shown below. Comparing to the 1127 Don Wayne Drive, I show no impact. I included 1135 Gwen Drive as a nearby comparable, but it is not a good comparable. According to the broker, Paul Coulter, that home had many recent and significant upgrades that made it superior to similar housing in the neighborhood. It is notably the highest sales price in the neighborhood. I have shown that one but I made no adjustment for those upgrades, but I won't rely on that sale for the matched pairs. This leaves 1127 Don Wayne Drive which shows no impact and 1160 Beth Drive, which had the fewest adjustments shows a 12% premium or enhancement for adjoining the solar farm. I consider the Don Wayne Drive match up to be the better of these two comparables even with a higher number of adjustments.

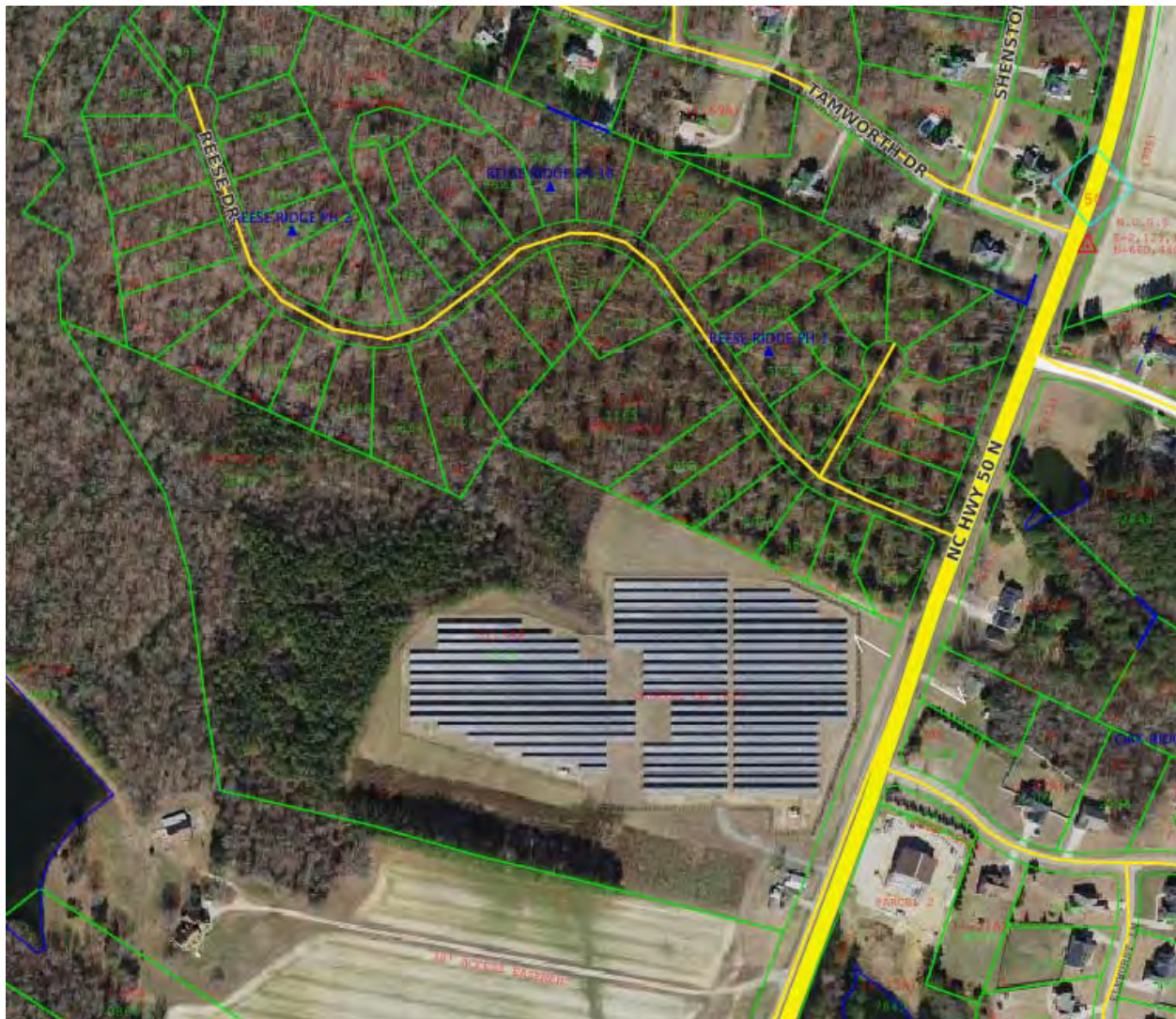
Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	1040 Cliff Dr	1.03	6/29/2017	\$145,600	1960	1,348	\$108.01	3/1.5	3-Car	Ranch	Brick/Wrkshp	255
Not	1127 Don Wayne	0.51	9/23/2019	\$176,900	1974	1,452	\$121.83	3/2	2-Car	Ranch	Brick/Ufin Bsmt	
Not	1135 Gwen Dr	0.43	7/26/2019	\$205,000	1967	1,671	\$122.68	3/2	2-Car	Ranch	Brick/Ufin Bsmt	
Not	1160 Beth Dr	0.46	6/20/2019	\$147,500	1970	1,482	\$99.53	4/1.5	2-Car	Ranch	Brick/Fin Bsmt	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	1040 Cliff Dr								\$145,600		1%
Not	1127 Don Wayne	-\$8,110		-\$12,383	-\$10,136	-\$5,000	\$5,000		\$146,271	0%	
Not	1135 Gwen Dr	-\$8,718		-\$7,175	-\$31,701	-\$5,000	\$5,000		\$157,406	-8%	
Not	1160 Beth Dr	-\$5,975		-\$7,375	-\$10,669		\$5,000		\$128,481	12%	

The two matched pairs identified show a range of -2% to +1% based on the average difference for each set of matched pairs. This is a very similar range I have found in most sales adjoining solar farms and strongly supports the assertion that the solar farm is not having a negative impact on adjoining property values.

38. Matched Pair – HCE Johnston I, LLC, Benson, NC



This 2.6 MW project was built in 2015 and located on 30.55 acres.

There is a new subdivision that was developed in 2019 just north of this solar farm called Reese's Ridge. This location is near the McGees Crossroads near Mount Pleasant Road. As can be seen in the map below, the adjoining land to the north of this solar farm was purchased in 2017 and subdivided as Reese Ridge with 0.49 to 0.53 acre lots. Most of the trees on this site were cleared as part of the development with a single row of pine trees retained as a buffer along the solar farm. The first six lots on the south side of Reese Drive are around 115 feet from the center point in the lot to the nearest solar farm panel. This tract of land was purchased on September 7, 2017 for \$925,000 for 42.388 acres, or \$21,822 per acre.

The proposed homes will be custom homes starting at \$330,000. County water is available and the homes will use individual septic tanks. I spoke with Amanda with The Rodney Carroll Team who is marketing the homes and she indicated that 7 custom home builders had a lottery to purchase all of the lots.

Three different builders have purchased lots adjoining the solar farm for \$60,000 each. Similar lots across Reese Drive and further from the solar farm are selling at the same \$60,000 each. At

\$60,000 this indicates a lot-to-home ratio of 18%, which is typical for new home construction in the county where there is no amenity package.



Since then a home was built and then sold at 63 Reese Drive, which is two lots off of NC 50 and backs up to the solar farm. Similarly, 107 Reese Drive which is six lots off of NC 50 and backs up to the solar farm. I have considered both of these for matched pairs as shown below.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins		107 Reese Drive	0.69	11/27/2019	\$393,000	2019	2,960	\$132.77	3/3	2-Car	1.5 Vinyl	
Not		200 Reese Drive	0.44	2/19/2020	\$400,000	2019	3,209	\$124.65	3/2.5	2-Car	1.5 Batten/Stone	
Not		35 Pawnee Pl	0.65	5/30/2018	\$325,000	2017	2,609	\$124.57	4/3	2-Car	1.5 Vinyl/Stone	
Not		278 Timber Wolf	0.88	1/24/2020	\$367,443	2019	2,983	\$123.18	3/3	2-Car	1.5 Vinyl/Stone	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins		107 Reese Drive								\$393,000		5%
Not		200 Reese Drive	-\$2,831		\$0	-\$24,830	\$5,000			\$377,338	4%	
Not		35 Pawnee Pl	\$14,954		\$3,250	\$34,979				\$378,183	4%	
Not		278 Timber Wolf	-\$1,796		\$0	-\$2,266				\$363,381	8%	

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins		63 Reese Drive	0.45	3/24/2020	\$410,000	2019	3,240	\$126.54	4/3	2-Car	Ranch/Wd	
Not		200 Reese Drive	0.44	2/19/2020	\$400,000	2019	3,209	\$124.65	3/2.5	2-Car	1.5 Batten/Stone	
Not		320 Wolf Den	0.97	9/27/2019	\$377,780	2019	3,122	\$121.01	4/3	2-Car	1.5 Vinyl/Stone	
Not		37 Makers Way	0.59	5/29/2019	\$373,508	2019	3,122	\$119.64	4/3	3-Car	1.5 Vinyl/Stone	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins		63 Reese Drive								\$410,000		3%
Not		200 Reese Drive	\$1,146		\$0	\$2,705	\$5,000			\$408,851	0%	
Not		320 Wolf Den	\$5,699		\$0	\$9,995				\$393,474	4%	
Not		37 Makers Way	\$9,443		\$0	\$9,882		-\$5,000		\$387,833	5%	

After adjustments, the two sales support a conclusion of no impact on property value due to the solar farm. I spoke with Rodney Carroll the broker marketing the homes and he indicated that the solar farm had zero impact on the sales price and they were marketing it as the best neighbor you could have.

Conclusion

The solar farm matched pairs shown above have similar characteristics to each other in terms of population, with most of the projects being in areas with a 1-mile radius population under 1,000, but with several outliers showing solar farms in farm more urban areas.

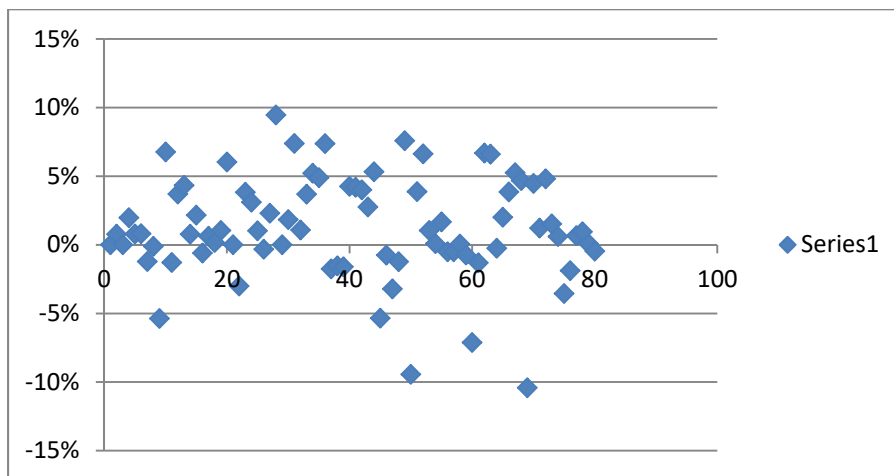
The median income for the population within 1 mile of a solar farm is \$63,665 with a median housing unit value of \$252,841. Most of the comparables are under \$400,000 in the home price, with \$770,000 being the high end of the set of matched pairs. The adjoining uses show that residential and agricultural uses are the predominant adjoining uses.

These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Kentucky and the proposed subject property.

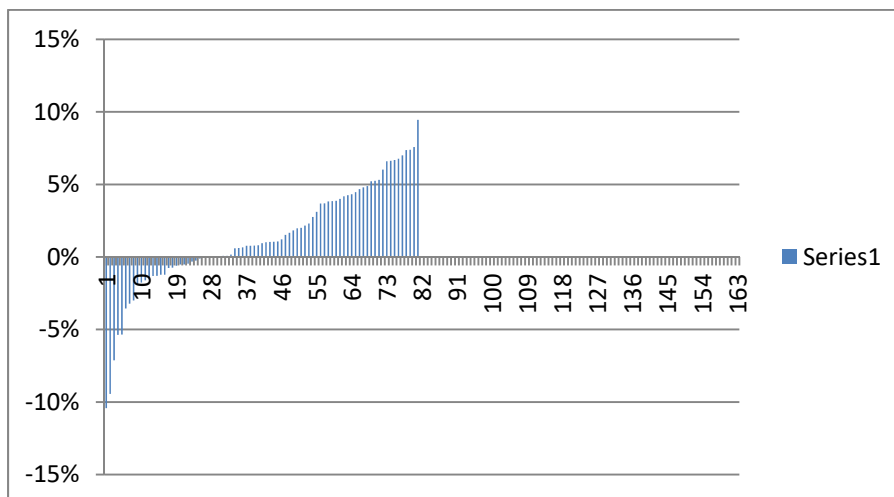
Matched Pair Summary					Adj. Uses By Acreage					1 mile Radius (2010-2019 Data)			
Name	City	State	Acres	MW	Topo Shift	Res	Ag/Res	Ag	Com/Ind	Population	Med. Income	Avg. Housing Unit	
1	AM Best	Goldsboro	NC	38	5.00	2	38%	23%	0%	39%	1,523	\$37,358	\$148,375
2	White Cross	Chapel Hill	NC	45	5.00	50	5%	51%	44%	0%	213	\$67,471	\$319,929
3	Wagstaff	Roxboro	NC	30	5.00	46	7%	89%	4%	0%	336	\$41,368	\$210,723
4	Mulberry	Selmer	TN	160	5.00	60	13%	10%	73%	3%	467	\$40,936	\$171,746
5	Nixon's	W. Friendship	MD	97	2.00	40	79%	4%	17%	0%	939	\$166,958	\$770,433
6	Leonard	Hughesville	MD	47	5.00	20	18%	0%	75%	6%	525	\$106,550	\$350,000
7	Talbot	Easton	MD	50	0.55	0	81%	0%	19%	0%	536	\$47,136	\$250,595
8	Alamo II	Converse	TX	98	4.40	30	95%	0%	5%	0%	9,257	\$62,363	\$138,617
9	Gastonia SC	Gastonia	NC	35	5.00	48	33%	23%	0%	44%	4,689	\$35,057	\$126,562
10	Summit	Moyock	NC	2,034	80.00	4	4%	94%	0%	2%	382	\$79,114	\$281,731
11	White Cross II	Chapel Hill	NC	34	2.80	35	25%	75%	0%	0%	213	\$67,471	\$319,929
12	Tracy	Bailey	NC	50	5.00	10	29%	71%	0%	0%	312	\$43,940	\$99,219
13	Manatee	Parrish	FL	1,180	75.00	20	2%	1%	97%	0%	48	\$75,000	\$291,667
14	McBride	Midland	NC	627	75.00	140	12%	78%	10%	0%	398	\$63,678	\$256,306
15	Yamhill II	Amity	OR	186	1.20	20	2%	0%	97%	1%	97	\$58,248	\$342,391
16	Marion	Aurora	OR	32	0.30	0	2%	37%	61%	0%	267	\$75,355	\$370,833
17	Clackamas II	Aurora	OR	156	0.22	0	7%	25%	68%	0%	3,062	\$70,911	\$464,501
18	Grand Ridge	Streator	IL	160	20.00	1	8%	5%	87%	0%	96	\$70,158	\$187,037
19	Portage	Portage	IN	56	2.00	0	19%	0%	81%	0%	6,642	\$65,695	\$186,463
20	Dominion	Indianapolis	IN	134	8.60	20	3%	0%	97%	0%	3,774	\$61,115	\$167,515
21	Beetle-Shelby	Shelby	NC	24	4.00	52	22%	0%	77%	1%	218	\$53,541	\$192,692
22	Courthouse	Bessemer	NC	52	5.00	150	48%	52%	0%	0%	551	\$45,968	\$139,404
23	Mariposa	Stanley	NC	36	5.00	96	48%	52%	0%	0%	1,716	\$36,439	\$137,884
24	Clarke Cnty	White Post	VA	234	20.00	70	14%	46%	39%	1%	578	\$81,022	\$374,453
25	Flemington	Flemington	NJ	120	9.36	N/A	13%	28%	50%	8%	3,477	\$105,714	\$444,696
26	Frenchtown	Frenchtown	NJ	139	7.90	N/A	37%	29%	35%	0%	457	\$111,562	\$515,399
27	McGraw	East Windsor	NJ	95	14.00	N/A	27%	0%	44%	29%	7,684	\$78,417	\$362,428
28	Tinton Falls	Tinton Falls	NJ	100	16.00	N/A	98%	0%	0%	2%	4,667	\$92,346	\$343,492
29	Simon	Social Circle	GA	237	30.00	71	1%	36%	63%	0%	203	\$76,155	\$269,922
30	Candace	Princeton	NC	54	5.00	22	76%	0%	24%	0%	448	\$51,002	\$107,171
31	Crittenden	Crittenden	KY	34	2.70	40	22%	27%	51%	0%	1,419	\$60,198	\$178,643
32	Walker	Barhamsville	VA	485	20.00	N/A	12%	20%	68%	0%	203	\$80,773	\$320,076
33	Innov 46	Hope Mills	NC	532	78.50	0	17%	0%	83%	0%	2,247	\$58,688	\$183,435
34	Innov 42	Fayetteville	NC	414	71.00	0	41%	0%	59%	0%	568	\$60,037	\$276,347
35	Demille	Lapeer	MI	160	28.40	10	10%	0%	68%	22%	2,010	\$47,208	\$187,214
36	Turrill	Lapeer	MI	230	19.60	10	75%	0%	59%	25%	2,390	\$46,839	\$110,361
37	Sunfish	Willow Spring	NC	50	6.40	30	35%	30%	35%	0%	1,515	\$63,652	\$253,138
38	HCE Johnston	Benson	NC	30	2.60	0	55%	45%	0%	0%	1,169	\$65,482	\$252,544
Average				218	17.17	33	30%	25%	42%	5%	1,718	\$67,130	\$265,891
Median				98	5.00	20	21%	22%	44%	0%	560	\$63,665	\$252,841
High				2,034	80.00	150	98%	94%	97%	44%	9,257	\$166,958	\$770,433
Low				24	0.22	0	1%	0%	0%	0%	48	\$35,057	\$99,219
1 Mile Radius	Fleming		2,350	188		12%	50%	37%	1%		133	\$45,987	\$172,297
3 Mile Radius	Fleming		2,350	188		12%	50%	37%	1%		1,325	\$46,987	\$169,596

I have pulled 83 matched pairs from the above referenced solar farms to provide the following summary of home sale matched pairs and land sales next to solar farms. The summary shows that the range of differences is from -10% to +9% with an average of +1% and median of +1%. This means that the average and median impact is for a slight positive impact due to adjacency to a solar farm. However, this 1% rate is within the typical variability I would expect from real estate. I therefore conclude that this data shows no negative or positive impact due to adjacency to a solar farm.

While the range is seemingly wide, the graph below clearly shows that the vast majority of the data falls between -5% and +5% and most of those are clearly in the 0 to +5% range.



Arranging the data points in order of impact, I get the following chart that shows only 3 matched pairs out of 83 identifying impacts greater than -5% and only 18 more out of 83 between -5% and 0. This leaves 62 out of 83 matched pairs showing positive impacts from 0 to +9%, or 75% of the total matched pairs. However, given that +/- 5% is considered no impact, that would include 70 of the 83 matched pairs, or 84% of the findings supporting a finding of no impact. The other readings are considered outliers with only 3 suggesting a negative impact and 10 suggesting a positive impact.



Similarly, the 10 land sales shows a median impact of 0% due to adjacency to a solar farm. The range of these adjustments range from -12% to +17%. Land prices tend to vary more widely than residential homes, which is part of that greater range. I consider this data to support no negative or positive impact due to adjacency to a solar farm.

Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	Area	MW	Approx		Sale Date	Sale Price	Adj. Sale Price	% Diff
						Distance	Tax ID/Address				
1	AM Best	Goldsboro	NC	Suburban	5	280	3600195570	Sep-13	\$250,000		
							3600198928	Mar-14	\$250,000	\$250,000	0%
2	AM Best	Goldsboro	NC	Suburban	5	280	3600195361	Sep-13	\$260,000		
							3600194813	Apr-14	\$258,000	\$258,000	1%
3	AM Best	Goldsboro	NC	Suburban	5	280	3600199891	Jul-14	\$250,000		
							3600198928	Mar-14	\$250,000	\$250,000	0%
4	AM Best	Goldsboro	NC	Suburban	5	280	3600198632	Aug-14	\$253,000		
							3600193710	Oct-13	\$248,000	\$248,000	2%
5	AM Best	Goldsboro	NC	Suburban	5	280	3600196656	Dec-13	\$255,000		
							3601105180	Dec-13	\$253,000	\$253,000	1%
6	AM Best	Goldsboro	NC	Suburban	5	280	3600182511	Feb-13	\$247,000		
							3600183905	Dec-12	\$240,000	\$245,000	1%
7	AM Best	Goldsboro	NC	Suburban	5	280	3600182784	Apr-13	\$245,000		
							3600193710	Oct-13	\$248,000	\$248,000	-1%
8	AM Best	Goldsboro	NC	Suburban	5	280	3600195361	Nov-15	\$267,500		
							3600195361	Sep-13	\$260,000	\$267,800	0%
9	Mulberry	Selmer	TN	Rural	5	400	0900A011	Jul-14	\$130,000		
							099CA043	Feb-15	\$148,900	\$136,988	-5%
10	Mulberry	Selmer	TN	Rural	5	400	099CA002	Jul-15	\$130,000		
							0990NA040	Mar-15	\$120,000	\$121,200	7%
11	Mulberry	Selmer	TN	Rural	5	480	491 Dusty	Oct-16	\$176,000		
							35 April	Aug-16	\$185,000	\$178,283	-1%
12	Mulberry	Selmer	TN	Rural	5	650	297 Country	Sep-16	\$150,000		
							53 Glen	Mar-17	\$126,000	\$144,460	4%
13	Mulberry	Selmer	TN	Rural	5	685	57 Cooper	Feb-19	\$163,000		
							191 Amelia	Aug-18	\$132,000	\$155,947	4%
14	Pine Valley	West End	NC	Rural	5	175	16893	Aug-16	\$66,000		
							16897	Aug-16	\$59,000	\$65,490	1%
15	Nixon's	W. Friendship	MD	Rural	2	660	12909 Vistaview	Sep-14	\$775,000	\$771,640	
							2712 Friendship Farm	Jun-14	\$690,000	\$755,000	2%
16	Leonard Rd	Hughesville	MD	Rural	5.5	230	14595 Box Elder	Feb-16	\$291,000		
							15313 Bassford Rd	Jul-16	\$329,800	\$292,760	-1%
17	Talbot Cnty	Easton	MD	Rural	0.55	1000	10193 Hiners	Oct-12	\$136,092		
							10711 Hiners	Dec-12	\$135,000	\$135,250	1%
18	Alamo II	San Antonio	TX	Suburban	4.4	360	7703 Redstone Mnr	Mar-16	\$166,000		
							7703 Redstone Mnr	Oct-12	\$149,980	\$165,728	0%
19	Alamo II	San Antonio	TX	Suburban	4.4	170	7807 Redstone Mnr	Aug-14	\$147,000		
							7807 Redstone Mnr	May-12	\$136,266	\$145,464	1%
20	Alamo II	San Antonio	TX	Suburban	4.4	150	7734 Sundew Mist	Nov-14	\$134,000		
							7734 Sundew Mist	May-12	\$117,140	\$125,928	6%
21	Neal Hawkins	Gastonia	NC	Suburban	5	275	139179	Mar-17	\$270,000		
							139179	Mar-17	\$270,000	\$270,000	0%
22	Summit	Moyock	NC	Suburban	80	1,060	129 Pinto	Apr-16	\$170,000		
							102 Timber	Apr-16	\$175,500	\$175,101	-3%
23	Summit	Moyock	NC	Suburban	80	2,020	105 Pinto	Dec-16	\$206,000		
							127 Ranchland	Jun-15	\$219,900	\$198,120	4%
24	White Cross II	Chapel Hill	NC	Rural	2.8	1,479	2018 Elkins	Feb-16	\$340,000		
							4200B Old Greensbor	Dec-15	\$380,000	\$329,438	3%
25	Tracy	Bailey	NC	Rural	5	780	9162 Winters	Jan-17	\$255,000		
							7352 Red Fox	Jun-16	\$176,000	\$252,399	1%
26	Manatee	Parrish	FL	Rural	75	1180	13670 Highland	Aug-18	\$255,000		
							13851 Highland	Sep-18	\$240,000	\$255,825	0%
27	McBride Place	Midland	NC	Rural	75	275	4380 Joyner	Nov-17	\$325,000		
							3870 Elkwood	Aug-16	\$250,000	\$317,523	2%
28	Yamhill II	Amity	OR	Rural	1.2	700	12001 SW Bellerus	Jul-15	\$326,456		
							9955 Bethel	Feb-16	\$289,900	\$295,593	9%
29	Clackamas II	Aurora	OR	Suburban	0.22	125	7620 SW Fairway	Jul-13	\$365,000		
							7480 SW Fairway	Jun-13	\$365,000	\$365,000	0%
30	Clackamas II	Aurora	OR	Suburban	0.22	125	7700 SW Fairway	Jun-14	\$377,100		
							7500 SW Fairway	Dec-11	\$365,000	\$370,175	2%
31	Clackamas II	Aurora	OR	Suburban	0.22	125	7380 SW Fairway	Jul-14	\$415,000		
							7480 SW Fairway	Jun-13	\$365,000	\$384,345	7%

Pair	Solar Farm	City	State	Area	MW	Approx Distance	Tax ID/Address	Sale Date	Sale Price	Adj. Sale Price	% Diff
32	Grand Ridge	Streator	IL	Rural	20	480	1497 E 21st	Oct-16	\$186,000		
							712 Columbus	Jun-16	\$166,000	\$184,000	1%
33	Portage	Portage	IN	Rural	2	1320	836 N 450 W	Sep-13	\$149,800		
							336 E 1050 N	Jan-13	\$155,000	\$144,282	4%
34	Dominion	Indianapolis	IN	Rural	8.6	400	2013249 (Tax ID)	Dec-15	\$140,000		
							5723 Minden	Nov-16	\$139,900	\$132,700	5%
35	Dominion	Indianapolis	IN	Rural	8.6	400	2013251 (Tax ID)	Sep-17	\$160,000		
							5910 Mosaic	Aug-16	\$146,000	\$152,190	5%
36	Dominion	Indianapolis	IN	Rural	8.6	400	2013252 (Tax ID)	May-17	\$147,000		
							5836 Sable	Jun-16	\$141,000	\$136,165	7%
37	Dominion	Indianapolis	IN	Rural	8.6	400	2013258 (Tax ID)	Dec-15	\$131,750		
							5904 Minden	May-16	\$130,000	\$134,068	-2%
38	Dominion	Indianapolis	IN	Rural	8.6	400	2013260 (Tax ID)	Mar-15	\$127,000		
							5904 Minden	May-16	\$130,000	\$128,957	-2%
39	Dominion	Indianapolis	IN	Rural	8.6	400	2013261 (Tax ID)	Feb-14	\$120,000		
							5904 Minden	May-16	\$130,000	\$121,930	-2%
40	Beetle-Shelby	Mooresboro	NC	Rural	4	945	1715 Timber	Oct-18	\$416,000		
							1021 Posting	Feb-19	\$414,000	\$398,276	4%
41	Courthouse	Bessemer	NC	Rural	5	375	2134 Tryon Court.	Mar-17	\$111,000		
							5550 Lennox	Oct-18	\$115,000	\$106,355	4%
42	Mariposa	Stanley	NC	Suburban	5	1155	215 Mariposa	Dec-17	\$249,000		
							110 Airport	May-16	\$166,000	\$239,026	4%
43	Mariposa	Stanley	NC	Suburban	5	570	242 Mariposa	Sep-15	\$180,000		
							110 Airport	Apr-16	\$166,000	\$175,043	3%
44	Clarke Cnty	White Post	VA	Rural	20	1230	833 Nations Spr	Jan-17	\$295,000		
							541 Old Kitchen	Sep-18	\$370,000	\$279,313	5%
45	Flemington	Flemington	NJ	Suburban	9.36	295	10 Coventry	Mar-18	\$370,000		
							1 Sheffield	Dec-17	\$399,900	\$389,809	-5%
46	Flemington	Flemington	NJ	Suburban	9.36	375	54 Hart	Jul-16	\$420,000		
							43 Aberdeen	Nov-16	\$417,000	\$423,190	-1%
47	Flemington	Flemington	NJ	Suburban	9.36	425	6 Portsmith	Jun-15	\$410,000		
							43 Aberdeen	Nov-16	\$417,000	\$423,190	-3%
48	Flemington	Flemington	NJ	Suburban	9.36	345	12 Stratford	Nov-17	\$414,900		
							28 Bristol	Dec-18	\$398,000	\$420,002	-1%
49	Frenchtown	Frenchtown	NJ	Rural	7.9	250	5 Muddy Run	Jun-17	\$385,000		
							132 Kingswood	Oct-16	\$380,000	\$355,823	8%
50	McGraw	East Windsor	NJ	Suburban	14	175	153 Wyndmoor	Apr-17	\$215,000		
							20 Spyglass	Dec-17	\$240,000	\$235,305	-9%
51	McGraw	East Windsor	NJ	Suburban	14	175	149 Wyndmoor	May-17	\$206,000		
							81 Wyndmoor	Jan-18	\$204,000	\$198,018	4%
52	McGraw	East Windsor	NJ	Suburban	14	400	26 Wilmor	Mar-19	\$286,000		
							25 Pinehurst	May-19	\$315,000	\$267,052	7%
53	Tinton Falls	Tinton Falls	NJ	Suburban	16	185	111 Kyle	Aug-18	\$402,000		
							80 Kyle	Sep-17	\$410,000	\$397,821	1%
54	Tinton Falls	Tinton Falls	NJ	Suburban	16	155	47 Kyle	Aug-18	\$260,000		
							4 Michael	Nov-18	\$260,000	\$259,788	0%
55	Tinton Falls	Tinton Falls	NJ	Suburban	16	150	7 Kyle	Jun-17	\$262,195		
							36 Kyle	Jan-19	\$260,000	\$257,824	2%
56	Tinton Falls	Tinton Falls	NJ	Suburban	16	155	1 Samantha	Sep-17	\$258,205		
							36 Kyle	Jan-19	\$260,000	\$259,533	-1%
57	Tinton Falls	Tinton Falls	NJ	Suburban	16	155	1 Samantha	Sep-17	\$258,205		
							36 Kyle	Jan-19	\$260,000	\$259,533	-1%
58	Candace	Princeton	NC	Suburban	5	488	499 Herring	Sep-17	\$215,000		
							1795 Bay Valley	Dec-17	\$194,000	\$214,902	0%
59	Crittenden	Crittenden	KY	Suburban	2.7	373	250 Claiborne	Jan-19	\$120,000		
							315 N Fork	May-19	\$107,000	\$120,889	-1%
60	Crittenden	Crittenden	KY	Suburban	2.7	488	300 Claiborne	Sep-18	\$213,000		
							1795 Bay Valley	Dec-17	\$231,200	\$228,180	-7%

Pair	Solar Farm	City	State	Area	MW	Approx		Sale Date	Sale Price	Adj. Sale Price	% Diff
						Distance	Tax ID/Address				
61	Crittenden	Crittenden	KY	Suburban	2.7	720	350 Claiborne	Jul-18	\$245,000		
							2160 Sherman	Jun-19	\$265,000	\$248,225	-1%
62	Crittenden	Crittenden	KY	Suburban	2.7	930	370 Claiborne	Aug-19	\$273,000		
							125 Lexington	Apr-18	\$240,000	\$254,751	7%
63	Walker	Barhamsville	VA	Rural	20	250	5241 Barham	Oct-18	\$264,000		
							9252 Ordinary	Jun-19	\$277,000	\$246,581	7%
64	AM Best	Goldsboro	NC	Suburban	5	385	103 Granville Pl	Jul-18	\$265,000		
							2219 Granville	Jan-18	\$260,000	\$265,682	0%
65	AM Best	Goldsboro	NC	Suburban	5	315	104 Erin	Jun-17	\$280,000		
							2219 Granville	Jan-18	\$265,000	\$274,390	2%
66	AM Best	Goldsboro	NC	Suburban	5	400	2312 Granville	May-18	\$284,900		
							2219 Granville	Jan-18	\$265,000	\$273,948	4%
67	AM Best	Goldsboro	NC	Suburban	5	400	2310 Granville	May-19	\$280,000		
							634 Friendly	Jul-19	\$267,000	\$265,291	5%
68	Summit	Moyock	NC	Suburban	80	570	318 Green View	Sep-19	\$357,000		
							336 Green View	Jan-19	\$365,000	\$340,286	5%
69	Summit	Moyock	NC	Suburban	80	440	164 Ranchland	Apr-19	\$169,000		
							105 Longhorn	Oct-17	\$184,500	\$186,616	-10%
70	Summit	Moyock	NC	Suburban	80	635	358 Oxford	Sep-19	\$478,000		
							176 Providence	Sep-19	\$425,000	\$456,623	4%
71	Summit	Moyock	NC	Suburban	80	970	343 Oxford	Mar-17	\$490,000		
							218 Oxford	Apr-17	\$525,000	\$484,064	1%
72	Innov 46	Hope Mills	NC	Suburban	78.5	435	6849 Roslin Farm	Feb-19	\$155,000		
							109 Bledsoe	Jan-19	\$150,000	\$147,558	5%
73	Innov 42	Fayetteville	NC	Suburban	71	340	2923 County Line	Feb-19	\$385,000		
							2109 John McMillan	Apr-18	\$320,000	\$379,156	2%
74	Innov 42	Fayetteville	NC	Suburban	71	330	2935 County Line	Jun-19	\$266,000		
							7031 Glynn Mill	May-18	\$255,000	\$264,422	1%
75	Demille	Lapeer	MI	Suburban	28	310	1120 Don Wayne	Aug-19	\$194,000		
							1231 Turrill	Apr-19	\$182,000	\$200,895	-4%
76	Demille	Lapeer	MI	Suburban	28	310	1126 Don Wayne	May-18	\$160,000		
							3565 Garden	May-19	\$165,000	\$163,016	-2%
77	Demille	Lapeer	MI	Suburban	28	380	1138 Don Wayne	Aug-19	\$191,000		
							1128 Gwen	Aug-18	\$187,500	\$189,733	1%
78	Demille	Lapeer	MI	Suburban	28	280	1174 Alice	Jan-19	\$165,000		
							1127 Don Wayne	Sep-19	\$176,900	\$163,443	1%
79	Turrill	Lapeer	MI	Suburban	20	290	1060 Cliff	Sep-18	\$200,500		
							1128 Gwen	Aug-18	\$187,500	\$200,350	0%
80	Turrill	Lapeer	MI	Suburban	20	255	1040 Cliff	Jun-17	\$145,600		
							1127 Don Wayne	Sep-19	\$176,900	\$146,271	0%
81	Sunfish	Willow Sprng	NC	Suburban	6.4	205	7513 Glen Willow	Sep-17	\$185,000		
							205 Pine Burr	Dec-17	\$191,000	\$172,487	7%
82	HCE Johnston	Benson	NC	Suburban	2.6	290	107 Reese	Nov-19	\$393,000		
							200 Reese	Feb-20	\$400,000	\$377,338	4%
83	HCE Johnston	Benson	NC	Suburban	2.6	105	63 Reese	Mar-20	\$410,000		
							320 Wolf Den	Sep-19	\$377,780	\$393,474	4%

	Avg.		
	MW	Distance	% Dif
Average	17.54	462	Average 1%
Median	5.00	375	Median 1%
High	80.00	2,020	High 9%
Low	0.22	105	Low -10%

Land Sale Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	Area	MW	Tax ID/Address	Sale Date	Sale Price	Acres	\$/AC	Adj. \$/AC	% Diff
1	White Cross	Chapel Hill	NC	Rural	5	9748336770	Jul-13	\$265,000	47.20	\$5,614		
						9747184527	Nov-10	\$361,000	59.09	\$6,109	\$5,278	6%
2	Wagstaff	Roxboro	NC	Rural	5	91817117960	Aug-13	\$164,000	18.82	\$8,714		
						91800759812	Dec-13	\$130,000	14.88	\$8,737	\$8,737	0%
3	Tracy	Bailey	NC	Rural	5	316003	Jul-16	\$70,000	13.22	\$5,295		
						6056	Oct-16	\$164,000	41.00	\$4,000	\$4,400	17%
4	Marion	Aurora	OR	Rural	0.3	18916 Butteville	Aug-14	\$259,000	15.75	\$16,444		
						Waconda	Sep-15	\$215,000	11.86	\$18,128	\$16,950	-3%
5	Portage	Portage	IN	Sub	2	64-06-19-200-003	Feb-14	\$149,600	18.70	\$8,000		
						64-15-08-200-010	Jan-17	\$115,000	15.02	\$7,656	\$7,198	10%
6	Courthouse	Bessemer	NC	Rural	5	5021 Buckland	Mar-18	\$58,500	9.66	\$6,056		
						Kiser	Nov-17	\$69,000	17.65	\$3,909	\$5,190	14%
7	Mariposa	Stanley	NC	Sub	5	174339	Jun-18	\$160,000	21.15	\$7,565		
						227852	May-18	\$97,000	10.57	\$9,177	\$7,565	0%
8	Mariposa	Stanley	NC	Sub	5	227039	Dec-17	\$66,500	6.86	\$9,694		
						177322	May-17	\$66,500	5.23	\$12,715	\$9,694	0%
9	Simon	Social Circle	GA	Rural	30	4514 Hawkins	Mar-16	\$180,000	36.86	\$4,883		
						Pannell	Nov-16	\$322,851	66.94	\$4,823	\$4,974	-2%
10	Candace	Princeton	NC	Sub	5	499 Herring	May-17	\$30,000	2.03	\$14,778		
						488 Herring	Dec-16	\$35,000	2.17	\$16,129	\$16,615	-12%
										Average		3%
										Median		0%
										High		17%
										Low		-12%

Larger Solar Farm Data

I have summarized the solar farm data for projects at 20 MW and larger as shown below. These are the same solar farms noted above but focused on larger projects.

Matched Pair Summary							Adj. Uses By Acreage				1 mile Radius (2010-2018 Data)		
	Name	City	State	Acres	MW	Topo Shift	Res	Ag/Res	Ag	Com/Ind	Population	Med. Income	Avg. Housing Unit
10	Summit	Moyock	NC	2,034	80.00	4	4%	94%	0%	2%	382	\$79,114	\$281,731
13	Manatee	Parrish	FL	1,180	75.00	20	2%	1%	97%	0%	48	\$75,000	\$291,667
14	McBride	Midland	NC	627	75.00	140	12%	78%	10%	0%	398	\$63,678	\$256,306
18	Grand Ridge	Streator	IL	160	20.00	1	8%	5%	87%	0%	96	\$70,158	\$187,037
24	Clarke Cnty	White Post	VA	234	20.00	70	14%	46%	39%	1%	578	\$81,022	\$374,453
26	Simon	Social Circle	GA	237	30.00	71	1%	36%	63%	0%	203	\$76,155	\$269,922
32	Walker	Barhamsville	VA	485	20.00	N/A	12%	20%	68%	0%	203	\$80,773	\$320,076
33	Innov 46	Hope Mills	NC	532	78.50	0	17%	0%	83%	0%	2,247	\$58,688	\$183,435
34	Innov 42	Fayetteville	NC	414	71.00	0	41%	0%	59%	0%	568	\$60,037	\$276,347
35	Demille	Lapeer	MI	160	28.40	10	10%	0%	68%	22%	2,010	\$47,208	\$187,214
36	Turrill	Lapeer	MI	230	19.60	10	75%	0%	59%	25%	2,390	\$46,839	\$110,361
	Average			572	47	33	18%	25%	58%	5%	829	\$67,152	\$248,959
	Median			414	30	10	12%	5%	63%	0%	398	\$70,158	\$269,922
	High			2,034	80	140	75%	94%	97%	25%	2,390	\$81,022	\$374,453
	Low			160	20	0	1%	0%	0%	0%	48	\$46,839	\$110,361

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set.

On the next page, I have reshown all of the 21 matched pairs specific to these 12 solar farms over 20 MW. This set shows impacts ranging from -10% to +7% with an average and median of +1%, which is very similar to the larger set. This suggests that the size of a project has no bearing on adjacent impacts as well.

Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	Area	MW	Approx Distance	Tax ID/Address	Sale Date	Sale Price	Adj. Sale Price	% Diff
21	Summit	Moyock	NC	Suburban	80	1,060	129 Pinto 102 Timber	Apr-16	\$170,000		
22	Summit	Moyock	NC	Suburban	80	2,020	105 Pinto 127 Ranchland	Apr-16 Dec-16	\$175,500 \$206,000	\$169,451	0%
25	Manatee	Parrish	FL	Rural	75	1180	13670 Highland 13851 Highland	Jun-15 Aug-18	\$219,900 \$255,000	\$194,278	6%
26	McBride Place	Midland	NC	Rural	75	275	4380 Joyner 3870 Elkwood	Sep-18 Nov-17	\$240,000 \$325,000	\$255,825	0%
31	Grand Ridge	Streator	IL	Rural	20	480	1497 E 21st 712 Columbus	Aug-16 Jun-16	\$250,000 \$166,000	\$317,523 \$184,000	2% 1%
44	Clarke Cnty	White Post	VA	Rural	20	1230	833 Nations Spr 541 Old Kitchen	Jan-17 Sep-18	\$295,000 \$370,000	\$279,313	5%
63	Walker	Barhamsville	VA	Rural	20	250	5241 Barham 9252 Ordinary	Oct-18 Jun-19	\$264,000 \$277,000	\$246,581	7%
68	Summit	Moyock	NC	Suburban	80	570	318 Green View 336 Green View	Sep-19 Jan-19	\$357,000 \$365,000	\$340,286	5%
69	Summit	Moyock	NC	Suburban	80	440	164 Ranchland 105 Longhorn	Apr-19 Oct-17	\$169,000 \$184,500	\$186,616	-10%
70	Summit	Moyock	NC	Suburban	80	635	358 Oxford 176 Providence	Sep-19 Sep-19	\$478,000 \$425,000	\$456,623	4%
71	Summit	Moyock	NC	Suburban	80	970	343 Oxford 218 Oxford	Mar-17 Apr-17	\$490,000 \$525,000	\$484,064	1%
72	Innov 46	Hope Mills	NC	Suburban	78.5	435	6849 Roslin Farm 109 Bledsoe	Feb-19 Jan-19	\$155,000 \$150,000	\$147,558	5%
73	Innov 42	Fayetteville	NC	Suburban	71	340	2923 County Line 2109 John McMillan	Feb-19 Apr-18	\$385,000 \$320,000	\$379,156	2%
74	Innov 42	Fayetteville	NC	Suburban	71	330	2935 County Line 7031 Glynn Mill	Jun-19 May-18	\$266,000 \$255,000	\$264,422	1%
75	Demille	Lapeer	MI	Suburban	28	310	1120 Don Wayne 1231 Turrill	Aug-19 Apr-19	\$194,000 \$182,000	\$200,895	-4%
76	Demille	Lapeer	MI	Suburban	28	310	1126 Don Wayne 3565 Garden	May-18 May-19	\$160,000 \$165,000	\$163,016	-2%
77	Demille	Lapeer	MI	Suburban	28	380	1138 Don Wayne 1128 Gwen	Aug-19 Aug-18	\$191,000 \$187,500	\$189,733	1%
78	Demille	Lapeer	MI	Suburban	28	280	1174 Alice 1127 Don Wayne	Jan-19 Sep-19	\$165,000 \$176,900	\$163,443	1%
79	Turrill	Lapeer	MI	Suburban	20	290	1060 Cliff 1128 Gwen	Sep-18 Aug-18	\$200,500 \$187,500	\$200,350	0%
80	Turrill	Lapeer	MI	Suburban	20	255	1040 Cliff 1127 Don Wayne	Jun-17 Sep-19	\$145,600 \$176,900	\$146,271	0%

	MW	Avg. Distance	Average	1%
Average	53.13	602	Average	1%
Median	71.00	408	Median	1%
High	80.00	2,020	High	7%
Low	20.00	250	Low	-10%

It's useful to note that Matched Pair 68 on Green View Drive is within a golf course community that adjoins the solar farm, but that test pair has no golf view.

I also note that Matched Pairs 71 and 74 were new homes that were built after the solar farm was constructed so the adjoining solar farm was not a limiting factor on construction in those cases.

I have also researched information on a number of larger solar farm projects across the country where many are newer and there have not been any adjoining sales for analysis at this time, but do show a similar range of adjoining uses as those projects listed above.

On the following page I show 63 projects ranging in size from 50 MW up to 1,000 MW with an average size of 118.48 MW and a median of 80 MW. The average closest distance for an adjoining home is 241 feet, while the median distance is 175 feet. The closest distance is 57 feet. The mix of adjoining uses is similar with most of the adjoining uses remaining residential or agricultural in nature.

Parcel #	State	County	City	Name	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre			
										Res	Agri	Agri/Res	Com
78	NC	Currituck	Moyock	Summit/Ranchland	80	2034		674	360	4%	94%	0%	2%
133	MS	Forrest	Hattiesburg	Hattiesburg	50	1129	479.6	650	315	35%	65%	0%	0%
179	SC	Jasper	Ridgeland	Jasper	140	1600	1000	461	108	2%	85%	13%	0%
211	NC	Halifax	Enfield	Chestnut	75	1428.1		1,429	210	4%	96%	0%	0%
222	VA	Mecklenburg	Chase City	Grasshopper	80	946.25				6%	87%	5%	1%
226	VA	Louisa	Louisa	Belcher	88	1238.1			150	19%	53%	28%	0%
305	FL	Pasco	Dade City	Mountain View	55	347.12		510	175	32%	39%	21%	8%
319	FL	Hamilton	Jasper	Hamilton	74.9	1268.9	537	3,596	240	5%	67%	28%	0%
336	FL	Manatee	Parrish	Manatee	74.5	1180.4		1,079	625	2%	50%	1%	47%
337	FL	DeSoto	Arcadia	Citrus	74.5	640				0%	0%	100%	0%
338	FL	Charlotte	Port Charlotte	Babcock	74.5	422.61				0%	0%	100%	0%
353	VA	Accomack	Oak Hall	Amazon East(ern shore)	80	1000		645	135	8%	75%	17%	0%
364	VA	Culpepper	Stevensburg	Greenwood	100	2266.6	1800	788	200	8%	62%	29%	0%
368	NC	Duplin	Warsaw	Warsaw	87.5	585.97	499	526	130	11%	66%	21%	3%
390	NC	Richmond	Ellerbe	Innovative Solar 34	50	385.24	226	N/A	N/A	1%	99%	0%	0%
399	NC	Cabarrus	Midland	McBride	74.9	974.59	627	1,425	140	12%	78%	9%	0%
400	FL	Polk	Mulberry	Alafia	51	420.35		490	105	7%	90%	3%	0%
406	VA	Halifax	Clover	Foxhound	91	1311.8		885	185	5%	61%	17%	18%
410	FL	Gilchrist	Trenton	Trenton	74.5	480		2,193	775	0%	26%	55%	19%
411	NC	Edgecombe	Battleboro	Fern	100	1235.4	960.71	1,494	220	5%	76%	19%	0%
412	MD	Caroline	Goldsboro	Cherrywood	202	1722.9	1073.7	429	200	10%	76%	13%	0%
434	NC	Edgecombe	Conetoe	Conetoe	80	1389.9	910.6	1,152	120	5%	78%	17%	0%
440	FL	Volusia	Debary	Debary	74.5	844.63		654	190	3%	27%	0%	70%
441	FL	Alachua & Pt	Hawthorne	Horizon	74.5	684				3%	81%	16%	0%
484	VA	Southampton	Newsoms	Southampton	100	3243.9		-	-	3%	78%	17%	3%
486	VA	Augusta	Stuarts Draft	Augusta	125	3197.4	1147	588	165	16%	61%	16%	7%
491	NC	Stanly	Misenheimer	Misenheimer 2018	80	740.2	687.2	504	130	11%	40%	22%	27%
494	VA	King and Que	Shacklefords	Walnut	110	1700	1173	641	165	14%	72%	13%	1%
496	VA	Halifax	Clover	Piney Creek	80	776.18	422	523	195	15%	62%	24%	0%
511	NC	Halifax	Scotland Neck	American Beech	160	3255.2	1807.8	1,262	205	2%	58%	38%	3%
514	NC	Rockingham	Reidsville	Williamsburg	80	802.6	507	734	200	25%	12%	63%	0%
517	VA	Page	Luray	Cape	100	566.53	461	519	110	42%	12%	46%	0%
518	VA	Greensville	Emporia	Fountain Creek	80	798.3	595	862	300	6%	23%	71%	0%
525	NC	Washington	Plymouth	Macadamia	484	5578.7	4813.5	1,513	275	1%	90%	9%	0%
526	NC	Cleveland	Mooreboro	Broad River	50	759.8	365	419	70	29%	55%	16%	0%
555	FL	Polk	Mulberry	Durrance	74.5	463.57	324.65	438	140	3%	97%	0%	0%
560	NC	Yadkin	Yadkinville	Sugar	60	477	357	382	65	19%	39%	20%	22%
561	NC	Halifax	Enfield	Halifax 80mw 2019	80	1007.6	1007.6	672	190	8%	73%	19%	0%
577	VA	Isle of Wight	Windsor	Windsor	85	564.1	564.1	572	160	9%	67%	24%	0%
579	VA	Spotsylvania	Paytes	Spotsylvania	500	6412	3500			9%	52%	11%	27%
582	NC	Rowan	Salisbury	China Grove	65	428.66	324.26	438	85	58%	4%	38%	0%
583	NC	Stokes	Walnut Cove	Lick Creek	50	1424	185.11	410	65	20%	64%	11%	5%
584	NC	Halifax	Enfield	Sweetleaf	94	1956.3	1250	968	160	5%	63%	32%	0%
586	VA	King William	Aylett	Sweet Sue	77	1262	576	1,617	680	7%	68%	25%	0%
593	NC	Bertie	Windsor	Sumac	120	3360.6	1257.9	876	160	4%	90%	6%	0%
599	TN	Payette	Somerville	Yum Yum	147	4000	1500	1,862	330	3%	32%	64%	1%
602	GA	Burke	Waynesboro	White Oak	76.5	516.7	516.7	2,995	1,790	1%	34%	65%	0%
603	GA	Taylor	Butler	Butler GA	103	2395.1	2395.1	1,534	255	2%	73%	23%	2%
604	GA	Taylor	Butler	White Pine	101.2	505.94	505.94	1,044	100	1%	51%	48%	1%
605	GA	Candler	Metter	Live Oak	51	417.84	417.84	910	235	4%	72%	23%	0%
606	GA	Jeff Davis	Hazelhurst	Hazelhurst II	52.5	947.15	490.42	2,114	105	9%	64%	27%	0%
607	GA	Decatur	Bainbridge	Decatur Parkway	80	781.5	781.5	1,123	450	2%	27%	22%	49%
608	GA	Sumter	Leslie-DeSoto	Americus	1000	9661.2	4437	5,210	510	1%	63%	36%	0%
616	FL	Colombia	Fort White	Fort White	74.5	570.5	457.2	828	220	12%	71%	17%	0%
621	VA	Surry	Spring Grove	Loblolly	150	2181.9	1000	1,860	110	7%	62%	31%	0%
622	VA	Albemarle	Scottsville	Woodridge	138	2260.9	1000	1,094	170	9%	63%	28%	0%
625	NC	Nash	Middlesex	Phobos	80	754.52	734	356	57	14%	75%	10%	0%
628	MI	Lenawee	Deerfield	Carroll Road	200	1694.8	1694.8	343	190	12%	86%	0%	2%
633	VA	Greensville	Emporia	Brunswick	150.2	2076.4	1387.3	1,091	240	4%	85%	11%	0%
634	NC	Surry	Elkin	Partin	50	429.4	257.64	945	155	30%	25%	15%	30%
638	GA	Twiggs	Dry Branch	Twiggs	200	2132.7	2132.7	-	-	10%	55%	35%	0%
639	NC	Cumberland	Hope Mills	Innovative Solar 46	78.5	531.87	531.87	423	125	17%	83%	0%	0%
640	NC	Cumberland	Hope Mills	Innovative Solar 42	71	413.99	413.99	375	135	41%	59%	0%	0%
Total Number of Solar Farms					63								
Average					118.48	1533.1	1043.6	1058	241	11%	60%	24%	6%
Median					80.00	1000.0	657.1	808	175	7%	64%	19%	0%
High					1000.00	9661.2	4813.5	5210	1790	58%	99%	100%	70%
Low					50.00	347.1	185.1	343	57	0%	0%	0%	0%

III. Distance Between Homes and Solar Panels

I have measured distances at matched pairs as close as 105 feet between panel and home to show no impact on value. This measurement goes from the closest point on the home to the closest solar panel. This is a strong indication that at this distance there is no impact on adjoining homes.

However, in tracking other approved solar farms across Kentucky, North Carolina and other states, I have found that it is common for there to be homes within 100 to 150 feet of solar panels. Given the visual barriers whether in privacy fencing or landscaping involved in these there is no sign of negative impact.

I have also tracked a number of locations where solar panels are between 50 and 100 feet of single family homes. In these cases the landscaping is typically a double row of more mature evergreens at time of planting. There are many examples of solar farms with one or two homes closer than 100-feet, but most of the adjoining homes are further than that distance.

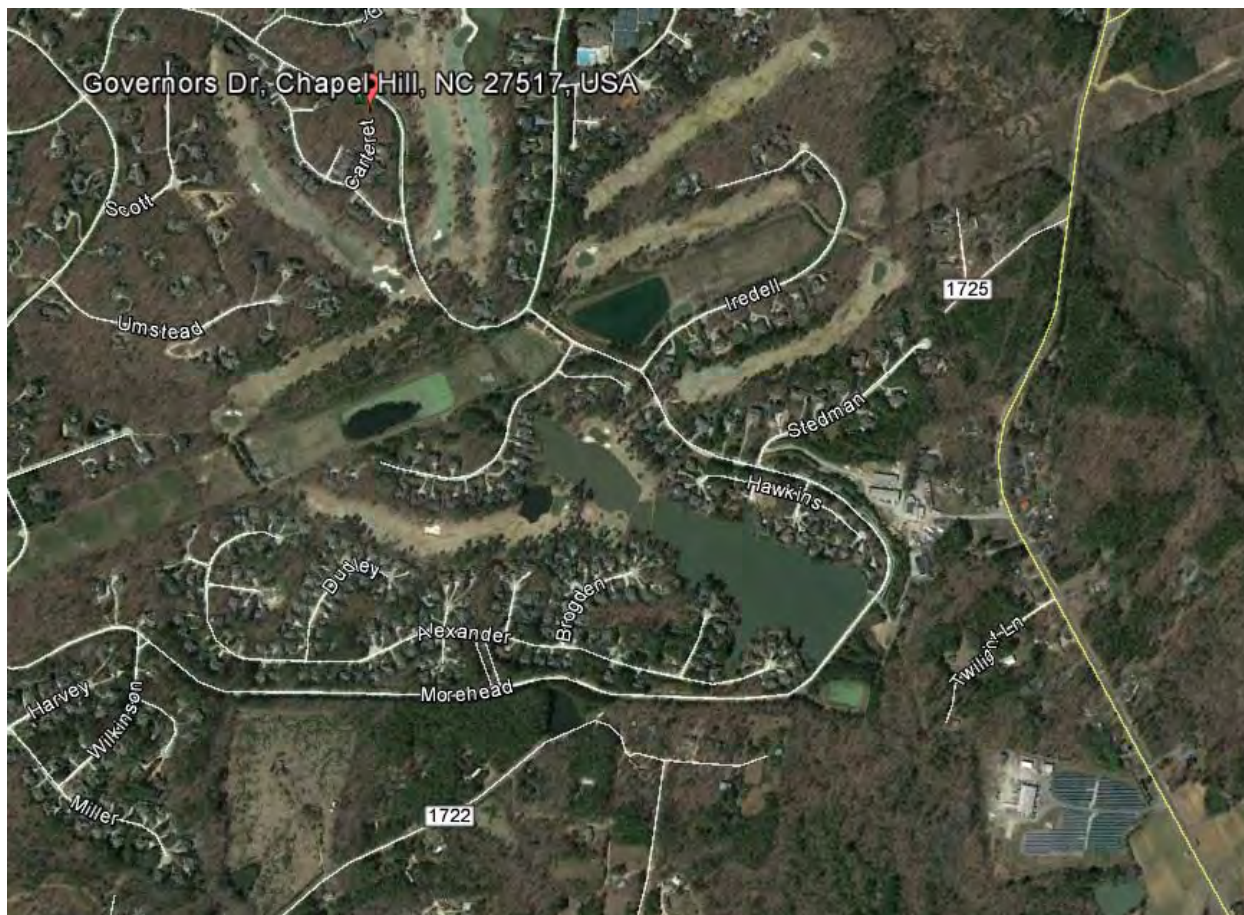
IV. Potential Impacts During Construction

I have previously been asked by the Kentucky Siting Board about potential impacts during construction. This is not a typical question I get as any development of a site will have a certain amount of construction, whether it is for a commercial agricultural use such as large scale poultry operations or a new residential subdivision. I defer to the traffic study on traffic impacts. Construction will be temporary and consistent with other development uses of the land and in fact dust from the construction will likely be less than most other construction projects given the minimal grading. I would not anticipate any impacts on property value due to construction on the site.

I note that in the matched pairs that I have included there have been a number of home sales that happened after a solar farm was approved but before the solar farm was built showing no impact on property value. Therefore the anticipated construction had no impact as shown by that data.

V. Scope of Research

I have researched nearly 700 solar farms and sites on which solar farms are existing and proposed in North Carolina, Kentucky, Virginia as well as other states to determine what uses are typically found in proximity with a solar farm. The data I have collected and provide in this report strongly supports the assertion that solar farms are having no negative consequences on adjoining agricultural and residential values. While I have focused on adjoining values, I note that there are many examples of solar farms being located within a quarter mile of residential developments, including such notable developments as Governor's Club in Chapel Hill, which has a solar farm within a quarter mile as shown on the following aerial map. Governor's Club is a gated golf community with homes selling for \$300,000 to over \$2 million.



The subdivisions included in the matched pair analysis also show an acceptance of residential uses adjoining solar farms with no negative impact on property value.

Beyond these references, I have quantified the adjoining uses for a number of solar farm comparables to derive a breakdown of the adjoining uses for each solar farm. The chart below shows the breakdown of adjoining or abutting uses by total acreage.

Percentage By Adjoining Acreage

	Res	Ag	Res/AG	Comm	Ind	Avg. Dist to Home	Closest Home	All Res Uses	All Comm Uses
Average	19%	53%	20%	1%	7%	849	346	92%	8%
Median	11%	57%	8%	0%	0%	661	215	100%	0%
High	100%	100%	100%	80%	96%	4,835	4,670	100%	96%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Sub = Substation, Com = Commercial, Ind = Industrial.

Total Solar Farms Considered: 493

I have also included a breakdown of each solar farm by number of adjoining parcels rather than acreage. Using both factors provides a more complete picture of the neighboring properties.

Percentage By Number of Parcels Adjoining

	Res	Ag	Res/AG	Comm	Ind	Avg. Dist to Home	Closest Home	All Res Uses	All Comm Uses
Average	61%	24%	9%	2%	4%	848	346	94%	6%
Median	65%	20%	5%	0%	0%	661	215	100%	0%
High	100%	100%	100%	60%	78%	4,835	4,670	100%	78%
Low	0%	0%	0%	0%	0%	90	25	22%	0%

Res = Residential, Ag = Agriculture, Sub = Substation, Com = Commercial, Ind = Industrial.

Total Solar Farms Considered: 493

Both of the above charts show a marked residential and agricultural adjoining use for most solar farms. Every single solar farm considered included an adjoining residential or residential agricultural use.

VI. Specific Factors Related To Impacts on Value

I have completed a number of Impact Studies related to a variety of uses and I have found that the most common areas for impact on adjoining values typically follow a hierarchy with descending levels of potential impact. I will discuss each of these categories and how they relate to a solar farm.

1. Hazardous material
2. Odor
3. Noise
4. Traffic
5. Stigma
6. Appearance

1. Hazardous material

The solar farm presents no potential hazardous waste byproduct as part of normal operation. Any fertilizer, weed control, vehicular traffic, or construction will be significantly less than typically applied in a residential development and even most agricultural uses.

The various solar farms that I have inspected and identified in the addenda have no known environmental impacts associated with the development and operation.

2. Odor

The various solar farms that I have inspected produced no odor.

3. Noise

Whether discussing passive fixed solar panels, or single-axis trackers, there is no negative impact associated with noise from a solar farm. The transformer reportedly has a hum similar to an HVAC that can only be heard in close proximity to this transformer and the buffers on the property are sufficient to make emitted sounds inaudible from the adjoining properties. No sound is emitted from the facility at night.

The various solar farms that I have inspected were inaudible from the roadways.

4. Traffic

The solar farm will have no onsite employee's or staff. The site requires only minimal maintenance. Relative to other potential uses of the site (such as a residential subdivision), the additional traffic generated by a solar farm use on this site is insignificant.

5. Stigma

There is no stigma associated with solar farms and solar farms and people generally respond favorably towards such a use. While an individual may express concerns about proximity to a solar farm, there is no specific stigma associated with a solar farm. Stigma generally refers to things such as adult establishments, prisons, rehabilitation facilities, and so forth.

Solar panels have no associated stigma and in smaller collections are found in yards and roofs in many residential communities. Solar farms are adjoining elementary, middle and high schools as well as churches and subdivisions. I note that Solar Farm Matched Pair Set 9 in this report not only adjoins a church, but is actually located on land owned by the church. Solar panels on a roof are often cited as an enhancement to the property in marketing brochures.

I see no basis for an impact from stigma due to a solar farm.

6. Appearance

I note that larger solar farms using fixed or tracking panels are a passive use of the land that is in keeping with a rural/residential area. As shown below, solar farms are comparable to larger greenhouses. This is not surprising given that a greenhouse is essentially another method for collecting passive solar energy. The greenhouse use is well received in residential/rural areas and has a similar visual impact as a solar farm.



The solar panels are all less than 15 feet high, which means that the visual impact of the solar panels will be similar in height to a typical greenhouse and lower than a single story residential dwelling. Were the subject property developed with single family housing, that development would have a much greater visual impact on the surrounding area given that a two-story home with attic could be three to four times as high as these proposed panels.

7. Conclusion

On the basis of the factors described above, it is my professional opinion that the proposed solar farm will not negatively impact adjoining property values. The only category of impact of note is appearance, which is addressed through setbacks and landscaping buffers. The matched pair data supports that conclusion.

VII. Conclusion

The matched pair analysis shows no impact in home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all support a finding of no impact on property value.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial injury to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved adjoining agricultural uses, schools, churches, and residential developments.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting property. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is no traffic.



Kirkland Appraisals, LLC

Richard C. Kirkland, Jr., MAI
9408 Northfield Court
Raleigh, North Carolina 27603
Mobile (919) 414-8142
rkirkland2@gmail.com
www.kirklandappraisals.com

Professional Experience

Kirkland Appraisals, LLC , Raleigh, N.C. Commercial appraiser	2003 – Present
Hester & Company , Raleigh, N.C. Commercial appraiser	1996 – 2003

Professional Affiliations

MAI (Member, Appraisal Institute) designation #11796	2001
NC State Certified General Appraiser # A4359	1999
VA State Certified General Appraiser # 4001017291	
SC State Certified General Appraiser # 6209	
FL State Certified General Appraiser # RZ3950	
IL State Certified General Appraiser # 553.002633	
OR State Certified General Appraiser # C001204	
KY State Certified General Appraiser # 5522	

Education

Bachelor of Arts in English , University of North Carolina, Chapel Hill	1993
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Continuing Education

Income Approach Case Studies for Commercial Appraisers	2018
Introduction to Expert Witness Testimony for Appraisers	2018
Appraising Small Apartment Properties	2018
Florida Appraisal Laws and Regulations	2018
Uniform Standards of Professional Appraisal Practice Update	2018
Appraisal of REO and Foreclosure Properties	2017
Appraisal of Self Storage Facilities	2017
Land and Site Valuation	2017
NCDOT Appraisal Principles and Procedures	2017
Uniform Standards of Professional Appraisal Practice Update	2016
Forecasting Revenue	2015
Wind Turbine Effect on Value	2015
Supervisor/Trainee Class	2015
Business Practices and Ethics	2014
Subdivision Valuation	2014
Uniform Standards of Professional Appraisal Practice Update	2014
Introduction to Vineyard and Winery Valuation	2013
Appraising Rural Residential Properties	2012
Uniform Standards of Professional Appraisal Practice Update	2012
Supervisors/Trainees	2011
Rates and Ratios: Making sense of GIMs, OARs, and DCFs	2011
Advanced Internet Search Strategies	2011

Analyzing Distressed Real Estate	2011
Uniform Standards of Professional Appraisal Practice Update Business Practices and Ethics	2011
Appraisal Curriculum Overview (2 Days – General)	2009
Appraisal Review - General	2009
Uniform Standards of Professional Appraisal Practice Update	2008
Subdivision Valuation: A Comprehensive Guide	2008
Office Building Valuation: A Contemporary Perspective	2008
Valuation of Detrimental Conditions in Real Estate	2007
The Appraisal of Small Subdivisions	2007
Uniform Standards of Professional Appraisal Practice Update	2006
Evaluating Commercial Construction	2005
Conservation Easements	2005
Uniform Standards of Professional Appraisal Practice Update	2004
Condemnation Appraising	2004
Land Valuation Adjustment Procedures	2004
Supporting Capitalization Rates	2004
Uniform Standards of Professional Appraisal Practice, C	2002
Wells and Septic Systems and Wastewater Irrigation Systems	2002
Appraisals 2002	2002
Analyzing Commercial Lease Clauses	2002
Conservation Easements	2000
Preparation for Litigation	2000
Appraisal of Nonconforming Uses	2000
Advanced Applications	2000
Highest and Best Use and Market Analysis	1999
Advanced Sales Comparison and Cost Approaches	1999
Advanced Income Capitalization	1998
Valuation of Detrimental Conditions in Real Estate	1999
Report Writing and Valuation Analysis	1999
Property Tax Values and Appeals	1997
Uniform Standards of Professional Appraisal Practice, A & B	1997
Basic Income Capitalization	1996

APPENDIX B
Legal Description of Site

TRACT 1:

File No. 305184NCT-14

Randy D. Barker and Marcylena Barker, his wife

PARCEL I: BEGINNING in center of Highway No 170, corner to John Zachary; thence leaving Highway with his line N. 34 deg. 40' W 210 feet crossing Johnson Creek to center of L & N R. R.; hence out center of railroad tracts S 57 Deg. 40' W 455 feet to corner to Tract # 3; thence with tract #3 S 57 Deg, 40' W 247 feet to Center of County road; thence out center of road N 12 Deg. 0' E 139 feet; thence N 23 deg. 20' E 107 feet to corner to John Zachary' thence with his line abut center of old county road N 54 Deg. 00' W. 455 feet; thence N 57 deg. 25' W 1039 feet to corner to J.H. Shanklin; thence with his line out old road N 56 Deg. 15' W 972 feet to corner to Chessie Vice; thence leaving road with his line S 26 Deg. 20' W 371 feet to post; thence N. 8 Deg. 18' W 767 feet to post, corner to Tract # 2; thence with Tract # 2 S 27 Deg. 12' W 301 feet to post; thence S 26 Deg. 07' W 94 feet to post; thence S 33 Deg. 52' W 183 feet to post; thence S 57 Deg. 00' E 1510 feet to post; thence S 32 Deg. 35 'W 458 feet to post; thence S 36 Deg. 04' W 700 feet to post; thence S 37 deg 00; W 186 feet to post; corner to Mrs. Staggs; thence with her line S 64 Deg. 30' E 688 feet to center of Johnson Creek; thence down creek S 01 Deg. 45' W 252 feet; thence S 09 Deg. 50' E 108 feet to center of L & N R.R.; thence out R.R. N 51 Deg. 05' E 300 feet; thence N 61 Deg. 37' E 1075 feet to corner to Emmons Farm; thence leaving R.R. with their line S 61 Deg. 11' E 771 Feet; thence crossing Johnson Creek S 25 Deg.00' E 75 feet to post; thence S 56 Deg. 00' East 145 feet to post; thence S 54 deg. 06' E 148 feet to center of Highway #170; thence out Highway N o2 Deg 40' E 300 feet; thence N 07 Deg. 20' E 71 feet; thence N 14 Deg. 17' E 80 feet; thence N 22 Deg. 11' E 95 feet; thence N 28 Deg. 04 ; E 100 feet; thence N 31 Deg. 001 E 900 feet; thence N 35 deg. 21' E 100 feet; thence N 42 Deg. 12' E 90 feet; thence N 50 deg. 10' E 75 feet to corner to John Zachary, the beginning, containing 136.156 acres.

Parcel II: BEGINNING at post, corner to Tract #1 in Mrs. Staggs line; thence with line of Tract #1 N 37 deg. 001 E 186 feet to post; thence N 36 deg. 04 1 E 700 feet to post; thence N 32 deg. 35' E 458 feet to post; thence N 57 deg. 00' W 1510 feet to post; thence N 33 deg. 52' E 183 feet to post; thence N 26 deg. 07' E 94 feet to post; thence N 27 deg. 12' E 301 feet to post, corner to Chessie Vice's line; thence with Vice's line N 68 deg. 18' W 786 to post; thence N 23 deg. 20'vE 35 feet to post; thence N 58 deg 56' W 475 feet to center of Nepton Road; thence out center of road S 26 deg. 13' W 700 feet; thence S 31 deg. 00' W 75 feet; thence S 38 deg. 45' W 1395 feet; thence S 32 deg. 06' W 73 feet; thence S 19 deg. 28' W 59 feet; thence S 06 deg. 11' W 62 feet; thence S 06 deg. 00' F. 65 feet; thence S 17 deg. 30' E 76 feet; thence 5 28 deg 00' E 78 feet; thence S 33 deg . 42' E 90 feet; thence S 37 deg 33' E 883 feet; thence S 30 deg. 00' E 109 feet to corner to Mrs. Staggs; thence leaving road with her line N 26 deg. 30' E 91 feet to post; thence S 60 deg. 15' E 1715 feet to post; thence N 29 deg. 05' E 985 feet to post, corner to Tract # 1, the beginning, containing 164.125 acres.

There is also conveyed herewith a certain right of way or passway or easement over and across the lands of McElfresh lying to the south of this property on the Mayslick-Nepton Rood and described as follows:-"In Fleming County, Kentucky, and beginning in A.D. Allen's line between two gate posts; thence due south 62 feet to a stake; thence S 17½ W 39 feet to a stake; thence S 55 1/4 W 96 feet to the center of the Mayslick-Nepton Roadway. Said measurements are the centerline of the 16.5 roadway pas sway to and from Parcel No 2 described hereinabove to the above named highway."

SAVE AND EXCEPT that tract or parcel of land in Deed dated February 16, 1990, recorded February 20, 1990 in Book 169, Page 54, Official Public Records, Fleming County, Kentucky, and being more particularly described as follows:

BEGINNING at an iron pin (set this survey) in the West right-of-way of a gravel County Road leading to John Zachery Farm, said point also being N 10" 37' 44" W, 26.28 feet from the center of T.T.I . Railroad crossing; thence with Randy Barker property line the following calls: N 70° 33' 44" W, 298.51 feet to an iron pin (set); thence N 34° 02' 00" E, 304.28 feet to an iron pin (set) in the center of abandoned County Road; thence with center of said roadbed S 53" 20' 53" E, 118.42 feet to an iron pin (set); thence S 44° 10' 50" E, 109.28' to an iron pin; (set) in said West right-of-way of gravel County Road; thence with said right-of-way S 16° 30' 00" W, 211.14 feet to the point of beginning, containing 1.5329 acres as surveyed by R.A. Wright, L.S. #2808.

Parcel No.: 023-00-00-010.00

TRACT 2:

File No. 305184NCT-6

J. Brian Clark (also known as James Brian Clark) and Julie A. Clark, his wife

Three certain tracts of land located in Fleming County, Kentucky, and more particularly described as follows:

The property described as the Home Place of Booten Hall located in Fleming County, Kentucky, on the Flemingsburg and Elizaville Turnpike Road and bounded and described as follows:

TRACT NO. 1: beginning at a point in the pike 1 pole S 4 ½ from a set stone 10 poles above the front gates; thence dividing the pike S 70 ½ W 42 1/10 poles to a point in the center of pike between and opposite two gates; thence S 80 W 42 ½ poles to a point in center of pike corner to tract allotted or devised to William Sousley; thence S 76 ½ W 42 1/10 poles to a point in the center of the pike; thence with Miss Pervis' line; N 4 ¾ W 167 8/100 poles to a stake corner to Garrett Allen; ½ poles South of where an old hickory once stood; thence with his line N 83 E 91 6/10 poles to a large set stone corner to same and Dorsey; thence S 85 and 47 E 7 8/10 poles to a set stone corner to tract allotted or devised to Virginia Sousley, thence with her line S 4 ½ E 158 4/10 poles to the beginning, containing 100 acres.

TRACT NO. 2: A tract or parcel of land situated in Fleming County, Kentucky, upon the waters of Mudlick and bounded as follows:

Beginning at a point corner to R.T. Kendall and in said Garey's line; thence with the line of the latter S 84 deg W 23.07 chs to a set stone corner to same and in same Dorsey line; thence with same N 5 ½ W 4.87 chs to a set stone corner to same and also corner to Courtney; thence with Courtney's line N 81 ¾ E 156 chs to a set stone; thence N ½ W 10.35 chs to a newly set stone in the line of the dower a corner to the tract conveyed to Morris Courtney; thence with same N 84 E 23.15 chs passing against the North side of the large ash tree at the spring and through the spring and to a newly set stone in Mrs. Dorsey's line; thence with her line and the line of R.T. Kendall; S 4 W 15.47 chs to the beginning, containing 35 acres.

TRACT NO. 3: A tract of land known as the Buckler farm located on the Flemingsburg and Elizaville turnpike road in Fleming County, Kentucky, and bounded and described as follows:

BEGINNING at a point in the center of same, a corner to Booten Hall; thence with his line N 3 ½ W passing over a set stone in line at 25 links in all 39.63 chs to a set stone in R.T. Kendall's line; thence with his line S 84 ¾ E 18.36 chs to a set stone corner to Peck; thence with Pecks' line S 3 ¼ W 35.48 chs to a point in the center of said turnpike; thence with same S 80 ¼ W 14.11 chs to the beginning, containing 60.33 acres.

THERE IS EXCEPTED HEREFROM AND NOT CONVEYED HEREIN a certain small strip of land conveyed to the Commonwealth of Kentucky for the use and benefit of the Transportation Cabinet. Department of Highways, dated July 1, 1987, and recorded in Deed Book 164, page 177, Fleming County Clerk's Records.

THERE IS FURTHER EXCEPTED HEREFROM AND NOT CONVEYED HEREIN, a certain tract previously sold to Jeff D. Stephens and Angie B. Stephens, husband and wife, from James Sankey Clark, single, by deed dated February 4, 2013 and recorded in Deed Book 249, Page 428, Fleming County Clerk's Office, and described as follows:

Being a 95.149 acre tract of land located east of Elizaville, west of Flemingsburg and on the north side of Ky Hwy 32 (Elizaville Road) in Fleming County, Kentucky and being more particularly described as follows:

Beginning at a ½" iron pin & cap found (J.D. Williams LS 316) at the right of way of Ky Hwy 32, corner to James Sankey Clark DB 213 Pg 32 and corner to J. Brian & Julie A. Clark DB 195 Pg 502; Thence along the line and fence of Clark DB 195 Pg 502 N 03-25-24 W 950.50' to a fence post found (flagged); Thence continuing along the line and fence of Clark DB 195 Pg 502 N 03-12-17 W 205.60' to an iron pin & cap set at a fence post; Thence N 03-50-34 W 943.65' to an iron pin & cap set; Thence N 03-50-06 W 604.35' to an iron pin & cap set; Thence N 04-40-22 W (passing an iron pin & cap set at 310.48') a total distance of 315.48' to a fence post in the line of Terry & Gayle Ann Vice DB 233 Pg 264; Thence along the line and fence of Vice N 82-19-38 E 83.83' to an iron pin & cap set at a fence

post; Thence continuing along the line and fence of Vice N 01-28- S3 E 688. 79' to an iron pin & cap set at a fence post corner to Vice & Clark; Thence along said line and fence N 83-S8-S0 E 975.46' to an iron pin & cap set new corner to Clark; Thence along the new division line of Clark S 11-46-46 E (passing an iron pin & cap set at 500.00') a total distance of 1005.64' to an iron pin & cap set; Thence continuing along the new division line of Clark S 11-46-46 E 670.57' to an iron & cap set new corner to Clark; Thence S 86-37-30 W 359.97' to an iron pin & cap set new corner to Clark; Thence S 10-01-48 E 900.80' to an iron pin & cap set; Thence S 07-49-30 E 977.14' to an iron pin & cap set at a fence post; Thence S 07-49-30 E 102.77' to an iron pin & cap set at the right of way of Ky Hwy 32 (Elizaville Road) new corner to Clark; Thence along the right of way of Ky Hwy 32 S 89-32-12 W 82.29' to a point 4S' left of centerline station 34+50; Thence continuing along the right of way of Ky Hwy 32 S 77-43-33 W 90.36' to a concrete right of way marker found 40' left of centerline station 33+60; Thence S 81-44-13 W 513.69'; Thence S 77-55-31 W 300.00' to a point 55' left of centerline station 25+50; Thence S 82-44-03 W 50.50' to a concrete right of way marker found 60' left of centerline station 25+00; Thence S 76-25-34 W 141.67' to the point of beginning containing 95.149 acres according to the survey by Travis A. McGlone PLS 3919 of Buffalo Trace Surveying LLC. 1/4/2013. See plat recorded in Plat Cabinet 4, Slide 409, Fleming County Clerk's Office.

All iron pin & caps set were ½" x 18" rebar with an orange plastic cap stamped "T.McGlone PLS 3919."

Bearings coordinated to the Kentucky State Plane Coordinate System, NAD83 (North Zone).

Property subject to all legal right of ways, easements of record and unrecorded conveyances.

Property subject to all utilities.

Property subject to existing right of way of Ky Hwy 32 (Elizaville Road) Plan BRS 5215 (9) sheet 4 of 25. (No Reference Found).

Parcel No.: 023-00-00-015.01

TRACT 3:

File No. 305184NCT-7

Timothy W. Cropper

A certain piece, parcel of land lying in Fleming County, Kentucky on the Convict turnpike and bounded as follows:

On the north by the Convict Turnpike; on the east by lands of Mrs. George Hurst, (now James Saunders); on the south by lands of Brown and Spencer, on the west by lands of Williams; the same containing 100 acres more or less and being sold as a boundary and to contain whatever it may.

Being the same real estate conveyed to John S. Cropper and Freda G. Cropper, husband and wife, by deed from John H. Clarke, Jr., et ux dated the 15th day of November, 1967 and of record in Deed Book 126, Page 3; and also being part of the same real estate conveyed to John S. Cropper and Freda G. Cropper, husband and wife, jointly and equally for life with remainder in fee simple to the survivor of them, by deed from John Larry Cropper, single, et als dated the 5th day of August, 1986 and of record in Deed Book 162, Page 306; all citations to the office of the Fleming County Clerk. The said John S. Cropper having died on the 8th day of March, 1988, leaving Freda G. Cropper the sole owner hereof by virtue of the survivorship clause contained in the above referenced deeds.

THERE IS RESERVED AND NOT CONVEYED HEREBY a Life Estate in the certain residence house where First Party now lives, together with approximately one acre of ground comprising the yard for said house, which is reserved to First Party for and during her natural lifetime, to live there rent free. and at her death same to be merged back into the 100 acres, more or less, and become the sole property of Timothy W. Cropper, Second Party herein.

IT IS FURTHER AGREED AND UNDERSTOOD that First Party is conveying to Second Party all of her rights and responsibilities in a certain Memorandum of Option and Lease Agreement dated the 7th day of October, 1993 with BellSouth Mobility, Inc. Said Memorandum being of record at Deed Book 178, Page 720, and same being amended by Amended Memorandum of Option and Lease Agreement dated the 22nd day of March, 1994, which Amendment

corrected the legal description in the prior memorandum, said Amendment being of record at Deed Book 179, Page 691; all citations to the office of the Fleming County Clerk.

Parcel No.: 030-00-00-029.00

TRACT 4:

File No. 305184NCT-17

Curt Fawns and Vanessa Fawns, his wife

PARCEL NO. I; TRACT NO. I: A tract of land situated in Fleming County, Kentucky, upon the waters of Johnson creek and bounded as follows:

BEGINNING at a point in J. Frank Dye's line a corner to the remaining tract of Elizabeth and Catherine Dye; thence with said Frank Dye's line S 22 ¼ W 17.73 chs to a set stone; thence S 85 W 24.81 chs. to a post upon the east side of the Highway and at the north side of the open passway also a corner to said Dye; thence S 10 ¼ E 24 links to the center of said passway and corner to Gifford's; thence up the center of said passway with that line N 85 E 21.12 chs to a point upon the center of same; thence S 60 ½ E 31 links to the gate post at the corner of said Gifford; thence. with their lines S 51 ½ E 8.21 chs. to a post at the tum of the fence; thence N 88 ½ E 12 chs.; thence S 67 E 12.76 chs to a point corner to W.L Dorsey heirs thence with his line N 10 ½ E 16.14 chs. to the point in said Dorsey's line and corner to the remaining tract of said Elizabeth and Catherine Dye; thence with the line of same N 64 ½ W 25.50 chs. to the Beginning, containing 50 acres, more or less, subject to legal rights of way and easements.

TRACT NO. II: A certain tract or parcel of land lying and being in Fleming, County, Ky. and described as follows:

BEGINNING at a point upon the center of the Elizaville and Helena turnpike, a corner to J. Frank Dye; thence with center of said pike N 34 E 3.07 chs. to a point upon the N. margin of same, a corner to A.J. Allen heirs and to the said J. Frank Dye; thence with his line dividing the pike about equally N 68 ¼ E.2.78 chs.; thence N 54 ½ E 3.60 chs.; thence N 43 E passing over the bridge end to a point upon the center of said pike, corner to J. Frank Dye and 40 ft passway of Jas. And Mary Schumacker 4.22 chs; in all 5.68 chs. to a point upon the center of said pike just opposite the center of the Flemingsburg or Convict pike; thence with said pike dividing it about equally S 58 ½ E 24.17 chs. to a point on the south margin of travelway of same, a corner to Elizabeth Land Catherine B. Dye; thence leaving the pike with their line S 20 ½ W 8.89 chs, to an old set stone on the bottom on the South side of the branch; thence S 50 E 34 links to a set stone; thence S 21 ¾ W 5.60 chs to a newly set stone in the line of Elizabeth L. and Catherine B. Dye and corner to J. Frank Dye; thence with the line of latter N 58 ½ W 31.35 chs. to the beginning containing 39.4 acres, more or less. Subject to legal right of ways and easements.

PARCEL NO. II: A certain tract of land situated in Fleming County, Kentucky, upon the waters of Johnson Creek and described as follows:

BEGINNING at a point upon the Flemingsburg Turnpike, corner to Mrs. Lida Smith; thence with the center of the turnpike S 69 ¾ E 51 poles and 16 links to a point upon the center of same, corner to W. I. Dorsey; thence leaving the road with his lines S 9 W 40 poles and 10 links to a post, corner to same; thence S 76 ½ E 24 poles and 11 links; thence S 8 W 92 poles and 3 links to a post in said Dorsey's line and corner to H.H. and Lida Smith's line; thence with their line N 64 ½ W 102 poles to a post, corner to same and in J. Frank Dye's line; thence with his line N 20 E 87 poles and 11 links to a set stone corner to Mrs. Smith; thence with her line N 52 ½ W 1 pole and 10 links to a stone; thence crossing the branch N 19 ½ E 35 poles and 20 links to the beginning, and containing approximately 63 acres, more or less.

SAVE AND EXCEPT that tract of parcel of land in Deed dated April 18, 2018, recorded April 20, 2018 in Book 267, Page 397, Official Public Records, Fleming County, Kentucky, and being more particularly described as follows:

Being a 4.830acre tract of land located at the junction of KY HWY 170 (Junction Road) and KY HWY 559 (Convict Pike) in Fleming County, Kentucky and being more particularly described as follows:

Beginning at an iron pin & cap set at the junction of the East right of way of KY HWY 170 and the South right of way of KY HWY 559 corner to Curt & Vanessa Fawns Deed Book 228, Page 644; Thence along the South right of way of KY HWY 559 S52°41'15"E a distance of 511.95' to an iron pin & cap set near a drainage ditch and new corner to

Fawns; Thence leaving the South right of way of KY HWY 559 along drainage ditch and the new line of Fawns and crossing the branch S51°18'17"W a distance of 473.58' to an iron pin & cap set new corner to Fawns; Thence continuing along the new line of Fawns N43°25'29"W a distance of 492.20' to an iron pin & cap set at the East right of way of KY HWY 170; Thence along the East right of way of KY HWY 170 with a curve turning to the left having an arc length of 89.71' a radius of 897.78' and a chord bearing & distance of N53°15'48"E 89.67' to a point being 30' right of centerline station 794+71.6; Thence continuing along the East right of way of KY HWY 170 N51°50'08"E a distance of 3.40' to a point being 30' right of centerline station 794+75; Thence S37°56'53"E a distance of 20.00' to a point being 50' right of centerline station 794+75; Thence N50°19'04"E a distance of 97.26' to a point being 50' right of centerline station 795+70; Thence N40°34' 59"W a distance of 20.00' to a point being 30' right of centerline station 795+70; Thence N49°07' 12"E a distance of 201.18' to the point of beginning containing 4.830 acres according to the survey by Travis A. McGlone PLS 3919 of Buffalo Trace Surveying LLC 1/8/2018 (Field survey completed on 12/14/2017 with a Topcon 236w total station as an urban class survey having an unadjusted traverse closure of 1:42,047).

All iron pin & caps set were ½" x 18" rebar with an orange plastic cap stamped "T. McGlone PLS 3919."

Magnetic North Bearing observed along a random traverse line on date of survey 12/14/2017 (N84W).

Property subject to all legal right of ways, easements of record and unrecorded conveyances.

Property subject to existing right of way for KY HWY 170 (Junction Road) for benefit of the Commonwealth of Kentucky Plan SP 954 A-GS dated 1934 sheet 19 of 125.

Property subject to existing right of way for KY HWY 559 (Convict Pike) for benefit of the Commonwealth of Kentucky Plan RSC 35-430-1 dated 1949 sheet 14 of 19. (40' total R/W).

Being a part of Parcel No. I, Tract No. II, of the same property conveyed to Curt Fawns and Vanessa Fawns, his wife, from John E. Williams and Marilyn Williams, his wife, by deed dated September 18, 2006, and recorded in Deed Book 228, Page 644, Fleming County Clerk's Office.

Parcel No.: 023-00-00-024.00

TRACT 5:

File No. 305184NCT-12

Samuel J. Harris and Cibina R. Harris, his wife

Parcel 1:

A certain tract or parcel of real estate, previously known as Farm 3 in a deed recorded in Deed Book 172, Page 578, Fleming County Clerk's Office, located on the Johnson-Flemingsburg turnpike about 3 ½ miles West of Flemingsburg, Fleming County, Kentucky, and being more particularly described as follows, to wit:

Beginning at the point in the center of the Johnson-Flemingsburg turnpike road, corner to Davis Gillespie, and running thence with the center of said road N. 69 deg. W 35.12 rods; N. 79-3/4 degrees, W 18 rods and N 85-1/2 degrees, W 27.84 rods to corner of Charlie Claypoole's land; thence with his line S 5 deg. W 96.68 rods to a post; S 83-3/4 degrees, East 13.40 rods to a post; thence S 5-1/2 degrees, West 29.72 rods to a post, and N 83-1/4 degrees, W 66.36 rods to a post, corner to same; thence S 3 deg., W 26.52 rods to a post, corner to Ray Brown and Davis Gillespie; thence with their lines S 85-5/8 degrees, East 128 rods to a set stone, corner to Davis Gillespie; thence with line of same North 12-1/4 degrees, East 25 rods to a post, and N 5 deg., East 115.6 rods to the place of beginning, in Fleming County, Kentucky.

AND

A certain tract of land lying and being on Ky. 559 in Fleming County, Kentucky and more particularly described as follows: Beginning at a point in the right of way of Ky. 559 and being a corner of Dallas Harris; thence with the Dallas Harris line S 8 deg. 52' W for 844.20 feet; thence S 16 deg. 51' for 1019.90 feet; thence S 29 deg. 51' W for

1055 feet to an iron rod corner of Dallas Harris and in the James Hurd line; thence with the James Hurd line, N 81 deg. 20' W for 1288.04 feet; thence S 87 deg. 33' W for 200.13 feet; thence N 84 deg. 47' W for 509 feet to a point in the Glen Brown line and a corner of James Hurd; thence with the Brown line N 8 deg. 15' W for 653.26 feet to a corner of James Saunders; thence with the Saunders line S 81 deg. 15' E for 2141 feet; thence N 18 deg. 50' E for 353 feet; thence N 14 deg. 25' E for 99.60 feet; thence N 9 deg. 30' E for 624 feet; thence N 8 deg. 45' E for 1242 feet to a point in the right of way of Ky. 559 and a corner of Saunders; thence with Ky. 559 right of way S 72 deg. 15' E for 101.70 feet; thence S 80 deg. 30' E for 361.30 feet to the beginning.

There is excepted from the foregoing the following described house and lot described generally as follows: Beginning at a point in the center of Convict Pike, which point is 529 feet from the Harris Line; thence leaving the road at about a 90 deg. Turn, a distance of 320 feet to a post; thence along the back line, a distance of 312 feet to a post; thence turning back toward the road a distance of 347 feet to the center of the Convict Road; thence down the center of said road, a distance of 282 feet to the point of beginning.

Being Farm 3 of the same property conveyed to Timothy E. Perkins and Brenda Perkins, his wife, from Paul R. Saunders and Patsy H. Saunders, his wife, by deed dated October 7, 1991, recorded in D.B. 172, Page 578, Fleming County Clerk's Office.

There is further excepted from the foregoing, the following described property conveyed to Robert J. Master and Martha Master, his wife from Timothy E. Perkins and Brenda Perkins, his wife, by deed dated October 28, 1991, recorded in Deed Book 172, Page 704, and more particularly described as follows:

A certain tract or parcel of land lying in Fleming County, Kentucky, on the Convict Road and described as follows: Beginning at the edge of the Convict Pike, corner to land of John Cropper, and running South, a distance of 1586 feet to a corner post; thence turning East, again along the Cropper line, a distance of 221 feet to the line of Perkins; and continuing along the same line, along the land of Perkins, a distance of 373 feet to a corner post; thence North 1233 feet to a post; thence West 132 feet to a post; thence North along the yard fence of the house of Paul Saunders, 303 feet to the edge of Convict Pike; thence along the edge of the pike, 538 feet to the point of beginning.

Parcel 1 contains 53.35 acres

Parcel 1 Tax ID No: 030-00-00-035.00

Parcel 2:

A certain tract of land lying and being on Ky. 559 in Fleming County, Kentucky, and more particularly described as follows:

BEGINNING at an iron in the right of way of Ky. 559 and being a corner of Paul Rayburn Jr.; thence with the Rayburn line S 9 deg. 00' W for 363.10 feet; thence S 00 deg. 50' W for 193.00 feet; thence S 76 deg. 15' E for 18.00 feet; thence S 14 deg. 15' E for 154.00 feet; thence S 70 deg. 10' E for 187.50 feet to a point in the Boling line; thence with the Boling line S 30 deg. 35' W for 146.80 feet; thence S 00 deg. 50' W for 987.50 feet; thence S 01 deg. 45' W for 994.50 feet to a point in the James Hurd line and a corner of Boling; thence with the Hurd line N 81 deg. 20' W for 1382.46 feet to an iron rod corner of Samuel Harris; thence with the Samuel Harris line N 29 deg. 51' E for 1055.00 feet to an iron rod; thence N 16 deg. 51' E for 1019.90 feet; thence N 8 deg. 52' E for 844.20 feet to a corner of Samuel Harris and in the right of way of Ky. 559; thence with Ky. 559 right of way S 80 deg. 30' E for 400.00 feet to the beginning.

THERE IS EXCEPTED and not conveyed herein an irregularly shaped tract of land which lies south and west of the above described tract and more particularly described as follows: BEGINNING at an iron rod with survey cap Henry Roark LS 1931, said rod being in the Jackie Boling line; thence with the Boling line N 30 deg. 35 min. E 135.80 feet to a corner of lot owned by Dallas R. Harris; thence N 70 deg. 10 min. W 187.50 feet with Harris line; thence N 14 deg. 15 min. W 154 feet; thence N 76 deg. 15 min. W 18 feet; thence S 8 deg. 30 min. W 98.74 feet; thence S 42 deg. 58 min. E 99.65 feet; thence S 33 deg. 46 min. 30 sec. E 196.19 feet to the beginning.

AND

A certain tract of land lying and being on Ky. 559 in Fleming County, Kentucky and more particularly described as follows: Beginning at a point in the right of way of Ky. 559 and being a corner of Dallas Harris; thence with the Dallas Harris line S 8 deg. 52' W for 844.20 feet; thence S 16 deg. 51' for 1019.90 feet; thence S 29 deg. 51' W for 1055 feet to an iron rod corner of Dallas Harris and in the James Hurd line; thence with the James Hurd line, N 81 deg. 20' W for 1288.04 feet; thence S 87 deg. 33' W for 200.13 feet; thence N 84 deg. 47' W for 509 feet to a point in the Glen Brown line and a corner of James Hurd; thence with the Brown line N 8 deg. 15' W for 653.26 feet to a corner of James Saunders; thence with the Saunders line S 81 deg. 15' E for 2141 feet; thence N 18 deg. 50' E for 353 feet; thence N 14 deg. 25' E for 99.60 feet; thence N 9 deg. 30' E for 624 feet; thence N 8 deg. 45' E for 1242 feet to a point in the right of way of Ky. 559 and a corner of Saunders; thence with Ky. 559 right of way S 72 deg. 15' E for 101.70 feet; thence S 80 deg. 30' E for 361.30 feet to the beginning.

Parcel 2 contains 101.517 acres
Parcel 2 Tax ID No: 030-00-00-032.00

Less and except that approximately 40-acre portion. **NEED METES AND BOUNDS FOR THIS EXCEPTED PARCEL, LEGAL PROVIDED BY DEVELOPER HAS A PICTURE IN PLACE**

Parcel No.: 030-00-00-035.00

TRACT 6:

File No. 305184NCT-4

Jacquelyn H. McCord and William P. McCord, her husband

A tract of land including improvements fronting on Kentucky Highway No. 32 in Fleming County, Kentucky, and being more particularly described as follows:

BEGINNING in the center of Kentucky Highway 32 opposite the site of the old schoolhouse; thence with the Noel Spencer line, North 3-3/4 deg. E 192.86 poles to a set stone; thence N 4 deg. 55.56 poles to a set stone corner to same; thence N 83-3/4 deg. W 36.68 poles to end of picket fence corner to Oliver Fryman's line; thence S 2-3/4 deg. W 57.1 poles to a stone; thence N 88-1/2 deg. W 2.6 poles to a stone; thence S 2 deg. W 6 poles to a stone; thence S 86 deg. 1.36 poles to a stone; thence S 3-3/4 E 76 poles to a stone; thence S 87-1/2 deg. W 7.76 poles; thence S 7 deg. W 52.4 poles; thence 3-1/2 deg. E 61 poles to the center of the highway; thence N 86-3/4 deg. E 40.6 poles to the beginning, containing 61 acres, 19 quarters and 21 poles.

Parcel No.: 031-00-00-001.00

TRACT 7:

File No. 305184NCT-9

Brenda F. Perkins

Parcel 1:

Two tracts of land located in Fleming County, Kentucky, fronting on Convict Pike and more particularly described as follows:

TRACT I: BEGINNING at a point upon the South edge of the pike leading from Flemingsburg to Johnson Station, a corner to Bethel School Lot at Charles Williams and Clarence Hill; thence with the center of the Dirt Road passing over a set stone corner to Mrs. Dorsey and in all S 4-3/8 W 18.66 chains to a point in Dirt road in Mrs. Dorsey's line and corner to Spencer; thence leaving the road with their line N 87-3/4 E 30.52 chains to a stake corner to same; thence with their line and continuing with Callahan's in all N 4 E 18.6 chains to a set stone in Callahan's line, a corner to Harry Williams; thence with his line and continuing with the pike in all N 86- 1/4 W 15.20 chains to a point upon the center of the pike; thence dividing the pike about equally N 87 W 6.94 chains; S 75-1/2 w 3.29 chains to a point upon the bridge; thence S 70 W 5.33 chains to the beginning, containing 60 acres.

Being the Same real estate conveyed to Charles Foster Williams, who is one and the same person as Charles F. Williams, by deed from Lake Williams, single, dated the 26th day of August, 1947 and of record in D.B. 104, Page 489, Fleming County Clerk's Office.

TRACT II: That triangular piece of land cut off of the farm of the late John B. Hendrick by the building of the Flemingsburg-Johnson Junction turnpike road (also known as Convict Pike), and bounded as follows:

BEGINNING at the center of the pike where it enters said farm and running SW a line formerly owned by Callahan to the corner of property former owned by Bell in the line formerly of Callahan; thence NW with the Bell line where it intersects the pike; thence with the center of said pike in an easterly direction to the beginning and containing 2-1/2 acres, more or less.

SAVE AND EXCEPT that tract or parcel of land in Deed dated February 7, 1990, recorded February 9, 1990 in Book 169, Page 8, Official Public Records, Fleming County, Kentucky, and being more particularly described as follows:

A tract of land which fronts on Convict Pike in Fleming County, Kentucky and which is more particularly described as follows:

BEGINNING at the edge of the highway right-of-way at a point 35' West of the Western edge of the existing driveway to the residential property of the late Charles F. Williams; thence leaving the highway in a general Southerly direction a distance of 185 feet to a point beyond the two (2) outbuildings in the yard; thence an approximate 90° angle in a general Easterly direction a distance of 957 feet to the property line of Freda Cropper; thence in a general northerly direction following the property line of Freda Cropper a distance of 293 feet to the southern edge of the Convict Pike right-of-way; thence in a general Westerly direction following the southern edge of Convict Pike a distance of feet to the beginning.

Being a part of both Tracts I and II of the property conveyed Timothy E. Perkins and Brenda Perkins, his wife, by deed from Judy L. Mers, et als, dated the 29th day of January, 1990 and of record in Book 169, Page 3, Fleming County Clerk's Office.

Parcel 1 contains 57.25 acres
Parcel 1 Tax ID No: 023-00-00-018.00

Parcel 2:

Lying and being in Fleming County, Ky., and bounded and described as follows: Beginning at a point upon the center of the Flemingsburg and Johnson turnpike a corner to Dorsey Bros. thence with the center of the pike and continuing with the back line of the school lot in all S. 80-7/8 E. 12.33 chs. to a set stone upon the center of the dirt road; thence S. 4-7/8 W. 16.27 chs to a new corner upon the center of the dirt road, thence leaving the road with a new line of W. I. Dorsey, N 80-7 /8 W. 12.28 chs. to a new corner to said W.I. Dorsey and in a line of Bruce Dorseys original tract, thence with same N. 4 ½ E. 16.27 chs. to the beginning containing 20 acres.

THERE IS EXCEPTED therefrom and not conveyed herein, the house and barn and stripping room and the lot surrounding them which is more particularly described as follows:

Beginning at a point in the center of the Convict Pike #559 and the dirt road and following down the center of the dirt road to a stake; thence W 173 feet to a stake a NE line to Perkins; thence N along Perkins line 228 feet to the edge of the crib; thence slightly Northeast 28 feet to a post; thence N 66 feet to the center of Convict Pike; thence down the center of the Pike to the point of beginning, and containing what it may. Being part of the same land conveyed the granter herein by Mary K. Dorsey, widow, by deed dated July 1, 1949 and recorded in D.B. 106, Page 561, Fleming County Court Clerk's Office.

FURTHER EXCEPTING that triangular piece of land cut off of the farm of the late John B. Hendrick by the building of the Flemingsburg-Johnson Junction turnpike road (also known as Convict Pike), and bounded as follows:

BEGINNING at the center of the pike where it enters said farm and running SW a line formerly owned by Callahan to the corner of property former owned by Bell in the line formerly of Callahan; thence NW with the Bell line where it intersects the pike; thence with the center of said pike in an easterly direction to the beginning.

Parcel 2 contains 20.00 acres
Parcel 2 Tax ID No: 023-00-00-021.00

Parcel 3:

Lying in Fleming County, Ky, and bounded as follows:

BEGINNING in the center of the Elizaville and Flemingsburg turnpike road in Sousley's line; thence with same N 3-8, E 186 and 1-3 poles to a stake: Sousley's corner; thence N 89 and 1-2, W 20 poles to a rock, Hedricks corner (now Dorsey's); thence N land 1-4 E 38 and 1-2 poles to a stake, Williams' corner; thence with his line S 89 and 1-2 E 131 and 1-4 poles to a stake corner to same- thence N 45 E and 1-4 E 74 and 2-3 poles to a rock, corner to same and Eliza Williams': thence with his line and W. C. Spencer S 1-2 W 194 poles to the center of turnpike; thence with same S 83 and 1-2 W 87 and 8-10 poles: thence S 81 and 1-2 W 60 poles; thence S 77 W 18 poles to the beginning, and containing 168 acres, 3 quarters and 18 poles.

Being a part of the same land conveyed Jessie K. Perkins by Deed dated April 10, 1963, from Richard Hinton Ingram, et al, as of record in D.B. 120, Page 531, and being the same property First Party inherited from R.T. Kendall by Will of record in W. B. Q, Page 259, and a part of the same land conveyed First Party by Deed from Carl Sebastian dated November 18, 1903, of record in D.B. 121, Page 282, Fleming County Clerk's Office.

AND

Lying in Fleming County, Kentucky, upon the waters of Mud Lick and bounded as follows – Beginning at an ash tree corner to J. S. Kendall farm and also corner to W. E. Garye; thence with the lines of Garey, Buckler and Peck S 84 $\frac{3}{4}$ E 27 82/100 chains to a point in Peck's line; thence N 4 $\frac{3}{4}$ E 14.36 chains to a set stake, a new corner to said Dorseyl thence with their line N 84 $\frac{3}{4}$ W 27.88 chains to a stake, a new corner in the line with said Kendall farm; thence with same S 4 $\frac{1}{2}$ W 14.36 chains to the beginning.

AND

Lying in Fleming County, Kentucky, upon the waters of Johnson Creek and upon the dirt road leading from the Elizaville and Flemingville turnpike road to the Convict Pike and described as follows: Beginning at a point upon the Northwest corner of the dirt road at a stake below the turn, a corner to Ida Hudson; thence along the west side of the dirt road S 5 $\frac{1}{8}$ W 16.70 chains to a post corner to R.T. Kendall's original tract; thence with the line of the same N 84 $\frac{1}{2}$ W 8.76 chains to a post in said line corner to W. I. Dorsey; thence with his line N 5 $\frac{1}{8}$ E 17.04 chains to a post in said line and corner to said Ida Hudson's remaining tract; thence with said tract S 82 E 8.69 chains to the beginning.

THERE IS EXCEPTED from the above tract, a tract of land conveyed to H. T. Grannis and described as follows:- Situated in Fleming County on the head waters of Mud Lick and on the north side of the Flemingsburg & Elizaville turnpike and bounded as follows:- BEGINNING in the center of the Flemingsburg & Elizaville pike, opposite a set stone on the north side of the pike near a large pond and near C. Y. Hillis' front gate; thence with Kendall's lines N 2 E 6 and 98/100 poles; thence N 23 and 3/4 E 3-44/100 poles; thence N 3 and 1/4 E 78 4/10 poles; thence S 89-1/4 E 8-34/100 poles; thence N 1-1/4 E 61-74/100 poles to a set stone corner to Kendall and also in Dorsey's line; thence with Dorsey's line S 86-1/4 E 24 32/100 poles to a set stone, corner to Dorsey's; thence with Dorsey's line N 48 3/4 E 74 27 /100 poles to a set stone corner to Dorsey and in Williams line; thence with Williams and Spencer's lines S 3 3/4 W 192 86 100 poles to the center of the Flemingsburg & Elizaville pike, opposite a set stone on the north side of the pike, in front of the schoolhouse; thence with the center of the pike S 86 3/4 W 84 90/100 poles to the beginning, containing 81 acres, 3 quarters and 13 poles, leaving in above tract 87 acres and 5 poles of land.

THERE IS ALSO EXCEPTED from the above tract of land the following tract of land conveyed to William Morgan Perkins, Jr., by Jessie K. Perkins and William Morgan Perkins, her husband, by Deed dated April 26, 1967, and of record in D. B. 125 , Page 193, Fleming County Clerk's Office.

Located on the Flemingsburg-Elizaville Road (Kentucky Highway No. 32) in Fleming County, Kentucky, and being more particularly described as follows, to-wit:

BEGINNING at a point in the center of Kentucky Highway 32; thence in a Northernly direction and said course being 100 feet East of the East wall of the present brick, personal residence of Jessie K Perkins and running for a distance of 208 feet to a stake and corner to other lands of Jessie K. Perkins: thence in an easterly direction 208 feet to a corner to other lands of Jessie K. Perkins: thence in a southerly direction of 208 feet to a point in the center of said highway; thence in a westerly direction with the center of said highway to the point of beginning and to contain what it will.

THERE IS ALSO EXCEPTED from the above tract of land the following tract conveyed to Timothy Eugene Perkins by Deed from Jessie K. Perkins, et al, dated the 15th day of June, 1967, as of record in D. B. 125, Page 752, Fleming County Clerk's Office.

A certain lot with residence and outbuilding thereon located on the North side of Kentucky Highway No. 32 in Fleming County, Kentucky; and being located about four (4) miles West of Flemingsburg, Kentucky, and being more particularly described as follows:

BEGINNING at a point in the corner of Kentucky Highway No. 32: thence about North a distance of 210 feet and on a line running 36 feet West of the West wall of the personal residence of the grantors in this deed to a fence and corner thereto: thence about West and running with the fence a distance of 174 feet to another fence and corner thereto; thence about South and running with said fence a distance of 210 feet to the center of said highway and corner thereto; thence about East with the center of said highway to the point of beginning and being a lot 210 feet by 174 feet to contain what it will.

THERE IS ALSO EXCEPTED from the above tract of land the following tract:

Beginning at a stake at the northeast corner of Second Party's other property; thence in a general easterly direction parallel with Kentucky Highway 32 to Oliver Fryman's boundary; thence following Fryman's boundary in a general southerly direction to the center of Kentucky Highway 32; thence down the center of Kentucky Highway 32 to Second Party's boundary; thence in a general northerly direction along Second Party's property line to the beginning, containing 1.50 acres, more or less.

Parcel 3 contains 134.00 acres
Parcel 3 Tax ID No: 023-00-00-027.00

Parcel 4:

BEGINNING at a point in center of public road a corner to Lake Williams; thence with center of said road S 5 ¾ W 16.80 chains to a point in same a corner to Grannis' thence with Grannis' line S 86 ¼ E 22.32 chains to a set stone in line of same; thence with a new line N 5 ¾ E 19.00 chains to a set stone in Lake Williams line; thence with said Williams line S 88 W 22.57 chains to a point of beginning, containing 40 acres

Parcel 4 contains 40 acres
Parcel 4 Tax ID No: 023-00-00-019.000

Parcel 5:

A certain parcel of real estate located in Fleming County, Kentucky, on the headwaters of Mud Lick and on the North side of the Elizaville and Flemingsburg Turnpike and bounded as follows:

BEGINNING in the center of the pike near Amy Hillis' front gate and opposite a set stone on the North side of the pike; thence with Kendall's line North 2 East 6.98; thence North 23 ¾ East 3.44 poles; thence North 3 ¼ East 78.4 poles; thence South 89 ¼ East 8.34 poles; thence North 1 ¼ East 61.74 poles to a stone corner to Kendall; thence N 86 ¾ West 106.68 poles to a stake on the West side of the read in Kendall's line; thence with his and Dorsey's line North 4 ¼ East 106.5 poles to a stone on the west side of the road; thence South 86 ½ East 145.72 poles to a stone in Spencer's line, corner to Errett Grannis; thence South 2 ¾ West 57.1 poles to a stone near Dorsey's stable; thence

North 88 ½ West 2.6 poles to a stone; thence South 2 West 6 poles to a stone; thence South 86 East 1.36 poles to a stone; thence South 3 ¾ East 76 poles to a stone in wire fence; thence South 87 1/2 West 20 poles to corner to wire fence at gate; thence South 7 West 52.4 poles; thence South 3 ½ East 61 poles to the center of the Elizaville Pike; thence South 86-3/4 West 44.3 poles to the beginning and containing 134 acres, one quarter and 39 poles.

This being the same property conveyed to First National Bank, Carlisle, Kentucky, a national bank association, by Oliver Fryman and Faye Fryman, husband and wife, by deed October 1, 1985, and of record in Deed Book 160, Page 609 of the Fleming County Clerk's Office.

Parcel 5 contains 134.25 acres.
Parcel 5 Tax ID No: 023-00-00-025.00

LESS AND EXCEPT that approximate 46.7 acre portion (NEED METES AND BOUNDS FOR THIS EXCEPTED PARCEL, LEGAL PROVIDED BY DEVELOPER HAS A PICTURE IN PLACE)

TRACT 8:

File No. 305184NCT-2

Susan Dorsey Ramey

Subject Property consists of the surface only of all that certain tract or parcel of land, known as the Dirt Road Tract, lying in Fleming County, Kentucky, more particularly described as follows:

Parcel I:

A certain tract of land lying in Fleming County, Kentucky, of record in Deed Book 236, Page 428. BEGINNING at a point upon the center of dirt road, a new corner to the tract this day conveyed to Mary K. Dorsey; thence with the center of the road S 4-7/8 W 17- 86-½ chs. to a set stone upon the center of the road at the turn, a corner to Grannis; thence with the road N 87 W. 11.94 chs. to a point in the NW corner of the road at another turn; thence S 51-¼ W 5.13 chs. to a point corner to R. T. Kendall; thence with his line N 82 W 8.69 chs. to a post corner to same and in the line of the original tract of said W. I. Dorsey; thence with his lines N 5-¼ E 15/37 chs. to a point corner to B. G. Dorsey's original tract; thence with his lines S 78-3/4 E 8.55 ¼ chs. to a point corner to same; thence N 4-½ E 9.47 chs. to a point in the line of same, a new corner to land conveyed to Mary K. Dorsey; thence with said land S 80-7/8 E 12.28 chs. to the beginning, containing 35 acres, 1 rood and 8 poles.

Parcel II:

A certain tract of land lying and being in Fleming County, Kentucky, and known as the Brick Place, and more particularly described as follows:

Situated in Fleming County, Kentucky, upon the waters of Johnson Creek and bounded as follows, to-wit:

BEGINNING at a stake, a new corner to the tract to be conveyed to W. 1. Dorsey; thence with the lines of same N 5-¼ E 5.23 chs. to a set stone corner to same; thence N 24-¾ E 9.09 chs. to a set stone; thence N 4-¾ E 24.83 chs. to a point upon the center of the Flemingsburg and Flemingsburg Junction Turnpike; thence with the pike dividing it about equally S 80-7/8 E 24.92 chs to a point upon the center of same a corner to Ida Dorsey Hudson; thence leaving the pike with her line S ¼ W 25.74 chs. to a post corner to same; thence S 78¾ W 8.55-¼ chs to a set stone corner to same; thence S 5-¼ W 12.06 chs. to a stake in her line and also corner to the tract to be conveyed to the said W. 1. Dorsey; thence with the line of same N 84 ½ W 19.18 chs. to the beginning, containing Eighty-Seven (87) Acres, Two (2) Roods and Twenty-Eight (28) Poles.

Being a part of the same property conveyed to Bernard R. Dorsey and Martha Dorsey, his wife, by Tom MacDonald and Janet MacDonald, his wife, as joint tenants with right of survivorship, by deed dated January 29, 1988 and recorded in Deed Book 165, Page 78, Fleming County Clerk's Office.

Bernard R. Dorsey died on March 15, 2003, leaving his wife, Martha Dorsey, the Grantor herein, as the sole owner of the property.

Parcel No.: 023-00-00-022.00

TRACT 9:

File No. 305184NCT-16

The Gary L. Shannon Family Trust, c/o Gary L. Shannon, successor trustee, as to an undivided one-fourth (1/4) interest

The Evelyn F. Shannon Revocable Trust, u/a/d March 26, 2001, c/o Evelyn Shannon, as to an undivided one-fourth (1/4) interest

Steven E. Hurd and wife, Ramona Hurd, Patricia H. Atherton and husband, Clyde Atherton, as beneficiaries of The Dorothy D. Hurd Revocable Trust, u/a/d December 28, 2000, c/o Dorothy D. Hurd, as to an undivided one-half (1/2) interest

A certain parcel or tract of land lying or situated approximately 0.4 mile South of Ky. Hwy. No. 559, the Convict Pike, near Flemingsburg City Limits, in Fleming County, Kentucky and more specifically described as follows;

BEGINNING at a corner post, said point being an existing common corner to Jackie P. Boling, et ux. (D.B. 179, Page 79) and Kenneth Arnett, Jr., the parent tract, (D.B. 200, Page 497 and D.B. 217, Page 420); thence with new division lines of the parent tract and along the existing fence for the following three (3) calls:

(1) South 86 deg. 15 min. 27 sec. East, passing a ½ inch rebar and cap (set witness corner) at 8.00 feet, for a total distance of 418.26 feet to a ½ inch rebar and cap (set) near the west base of a brace post;

(2) thence South 87 deg. 27 min. 53 sec. East, 50.38 feet to a ½ inch rebar and cap (set) near the east base of a post;

(3) thence South 86 deg. 53 min. 17 sec. East, 467.73 feet to a ½ inch rebar and cap (set) in the line of Robert W. Crain (D.B. 123, Page 1 and W.B. "Q", Page 227); thence with the lines of Crain for the following two (2) calls:

(1) South 21 deg. 03 min. 35 sec. West, 92.61 feet to a ½ inch rebar and cap (set);

(2) thence South 6 deg. 40 min. 00 sec. West, 993 .23 feet to a corner post in the line of Dorothy D. Hurd and J.B. and Evelyn Shannon Trusts (D.B. 161, Page 507, D.B. 207, Page 488, and D.B. 207, Page 497); thence with the lines of same for the following two (2) calls:

(1) North 85 deg. 14 min. 45 sec. West, passing a ½ inch rebar and cap (set witness corner) at 10.00 feet, for a total distance 1213.37 feet to a corner post;

(2) Thence North 4 deg. 00 min. 00 sec. East, passing a ½ inch rebar and cap (set witness corner) at 17 .00 feet for a total distance of 1053.10 feet to a corner post in the line of aforesaid Boling; thence with the line of Boling South 86 deg. 11 min. 28 sec. East, passing a ½ inch rebar and cap (set witness corner) at 8.00 feet for a total distance of 350.35 feet to the Point of Beginning; Containing 30.30 Acres and subject to all easements, restrictions or covenants of record.

This description was prepared in conjunction with a Class "A" survey, field completed on May 12, 2004, by William T. (Tommy) Carpenter, PLS 2380. The ½ inch X 24 inch rebars set this survey bear a one (1) inch diameter orange plastic I.D. cap stamped W.T.C., PLS 2380 at property corners and W.T.C., 2380-WIT. COR. At witness corners. The bearings stated in this description are referenced to the Magnetic Meridian as noted on said plat

Being the same real estate conveyed J.B. Shannon and Evelyn F. Shannon, husband and wife, and Dorothy Hurd, single, from Kenneth Arnett, Jr. and Penny G. Arnett, husband and wife, by deed dated the 10th day of June, 2004, and of record in Deed Book 219, Page 187, Fleming County Clerk's Office.

Parcel No.: 030-00-00-043.00

Tract 2:

A certain tract or parcel of land located in Fleming County at or near the west city limits of Flemingsburg, Kentucky on Ky. #32, beginning at a point 30.00 feet from the center of Ky. #32 on the north side and corner to the Horse Horton property. Thence with the Horse Horton property and the Steve & Bill Brown property N 40° 30' 45" W a distance of 2180. 70 feet; thence with the property of Steve & Bill Brown S 78° 04' 45" W a distance of 1116.48 feet to the property corner of Glen T. Brown; thence with the property of Glen T. Brown N 37° 27' 45" W a distance of 2671.23

feet; thence N 10° 49' W a distance of 627.26 feet to Olive Harris property corner. Thence with the Olive Harris property S 87° 24' 52" E a distance of 505.38 feet to an existing set stone; thence S 19° 13' 06" E a distance of 443.88 feet; thence N 74° 30' 30" E a distance of 132.50 feet to an existing set stone; thence N 11° 08' 15" W a distance of 382.34 feet to an existing set stone; thence with the properties of Olive Harris and Joe McCormack respectively S 84° 18' 45" E a distance of 2768.38 feet to the corner between Joe McCormack and Charles Brown; thence with the property of Charles Brown S 5° 41' W a distance of 1056.98 feet; thence with the properties of Charles Brown and Robert Crain respectively S 83° 28' 30" E a distance of 1732.73 feet to an existing set stone corner to Flemingsburg City Lake property; thence with the Flemingsburg City Lake property S 84° 36' E a distance of 60.51 feet; thence S 66° 45' 42" E a distance of 180.16 feet; thence S 45° 11' 45" E a distance of 493.56 feet; thence S 55° 14' 32" E a distance of 163.60 feet; thence S 46° 33' 28" E a distance of 136.45 feet; thence S 0° 25' 19" W a distance of 59.66 feet; thence S 54° 31' 08" W a distance of 238.53 feet; thence S 47° 17' 55" W a distance of 191.99 feet; thence S 46° 08' W a distance of 75.99 feet; thence S 42° 36' 38" W a distance of 144.14 feet; thence S 48° 28' W a distance of 252.22 feet; thence N 6° 00' W a distance of 54.84 feet; thence S 67° 41' W a distance of 366.00 feet; thence S 73° 55' 57" W a distance of 144.00 feet; thence S 63° 41' 57" W a distance of 309.40 feet; thence S 2° 34' 38" W a distance of 64.96 feet to the corner of the property of Dr. Rudianna Thomas; thence with Dr. Rudianna Thomas property S 9° 24' 40" W a distance of 164.15 feet to an existing set stone corner to the Fleming County High School property; thence with the school property S 6° 27' 14" W a distance of 400.20 feet corner to a four lot subdivision; thence with the subdivision property N 81° 26' 46" W a distance of 477.36 feet to an existing Iron Pin; thence S 1° 52' 14" W a distance of 513.84 feet to an existing Iron Pin corner to subdivision and 30.00 feet from the center of Ky. #32. Thence with a line 30.00 feet from the center of Ky. #32 on the north side N 83° 34' 48" W a distance of 100.00 feet; thence N 85° 35' 18" W a distance of 100.00 feet; thence N 87° 35' 18" W a distance of 100.00 feet; thence N 88° 35' 18" W a distance of 100.00 feet; thence N 89° 31' 48" W a distance of 91.44 feet to the beginning. Contains 318.63 acres. Being the property described in Deed Book 129, Page 174. Surveyed by Richard L. Adkins R.L.S. Ky. Reg. #838 on March 26, 1986. (Plat Cabinet# 1, Page 67).

THERE IS EXCEPTED AND NOT CONVEYED HEREIN a certain tract of land in which J.B. Shannon and Evelyn Shannon, husband and wife, conveyed all of their undivided one-half interest in said property to James A. Hurd and Dorothy D. Hurd, his wife, by a deed dated the 26th day of May, 1987 and of record in Deed Book 164, Page 107, Fleming County Clerk's Office (James A. Hurd and Dorothy D. Hurd, his wife, were already the owners of the other undivided one-half interest in said property by the conveyance of record in Deed Book 161, Page 507, Fleming County Clerk's Office), and which property is more particularly described as follows: The following described real estate, located in Fleming Co., Ky, to-wit:

BEGINNING at a point in the property line of Fleming County Board of Education and common corner to property owned by James A. and Dorothy Hurd and property designated as Lakeview Farm; thence with the property line between Lakeview Farm and Fleming County Board of Education N 6° 27' 14" E a distance of 80.00 feet; thence leaving said property line N 81° 29' 28" W a distance of 241.93 feet; thence S 4° 07' 14" W a distance of 80.00 feet to the corner of the property owned by James A. and Dorothy Hurd; thence with the property line between the property owned by James A. and Dorothy Hurd and Lakeview Farm S 81° 26' 46" E a distance of 238.68 feet to the beginning, and containing 0.44 acres.

THERE IS EXCEPTED AND NOT CONVEYED HEREIN, a certain tract of land conveyed to Clyde Atherton and Patricia H. Atherton, husband and wife, from J.B. Shannon and Evelyn Shannon, husband and wife, and Dorothy D. Hurd, single, by a deed dated the 31st day of December, 1998 and of record in Deed Book 195, Page 735, Fleming County Clerk's Office, and which is more particularly described as follows:

A certain tract of land in Fleming County and located at the northwest city limits of Flemingsburg. Unless otherwise stated the pin and cap referred to herein is a 1/2" X 18" steel re-bar with a 2" aluminum cap stamped R.L. Adkins KY. LS. #838. Bearings stated herein are magnetic from March 26, 1986 survey.

BEGINNING at a pin and cap at the northwest corner of lot #2 and in the fence corner being the city limits of Flemingsburg and corner of James A. Hurd and Dorothy D. Hurd, J.B. Shannon and Evelyn Shannon property; thence severing the Hurd and Shannon property, N 80° 49' 09" W 199.38 feet to a pin and cap in the fence corner; thence 1° 20' 53" E 116.75 feet to a pin and cap at the gate post in the fence; thence N 4° 45' 43" E 257.30 feet to a pin and cap in the fence; thence leaving the fence S 85° 39' 46" E 696.00 feet to a pin and cap in the fence, properly line of Randall V. Fritz and Jowana L. Fritz; thence with line of Fritz and the Hurd and Shannon property S 9° 24' 40" W 26.00 feet

to an existing set stone, corner to the Hurd and Shannon property, Fritz property, and Fleming County High School property; thence with the school property and the Hurd and Shannon property S 6° 27' 14" W 320.20 to a pin and cap in the fence corner, corner of a 0.44 acre tract of James A. Hurd and Dorothy D. Hurd; thence leaving the school line, N 81° 29' 28" W 241.93 feet with the Hurds and Shannon line and line of the 0.44 acre tract of Hurds to a pin and cap in the fence corner; thence S 4° 07' 14" W 80.00 feet to a pin and cap in the fence corner, corner to the 0.44 acre tract of Hurds and corner between lot 2 and lot 3 of a four lot unnamed subdivision at the city limits, line of lot 2, and the line of Hurds and Shannons N 81° 26' 46" W 238.68 feet to the point of beginning and containing 5.88 acres. Survey by Richard L. Adkins Ky. Reg. #838, November 18, 1998.

First Parties also grant unto Second Parties a non-exclusive right-of-way over the existing farm road commencing at the Northern right-of-way of Ky. Hwy. 32; thence in a general Northerly direction following the Eastern boundary of said farm road a distance of 628 feet; thence at a right angle in a general Westerly direction a distance of 13 feet; thence at another right angle in a general Southerly direction a distance of 628 feet to the right-of-way of Ky. Hwy. 32; thence in a general Easterly direction following the said highway right-of-way 13 feet to the beginning. First Parties also grant unto Second Parties access from the Western boundary line of the property being conveyed in fee simple in this deed a distance of 27' in width to the said farm road.

THERE IS FURTHER EXCEPTED AND NOT CONVEYED HEREIN a certain tract of land conveyed to the Flemingsburg Baptist Church, Inc., from J. B. Shannon, et al, by a deed dated the 27th day of December 2000, and of record in Deed Book 205, Page 527, Fleming County Clerk's Office, and which is more particularly described as follows:

A certain parcel or tract of land lying or situated on the North side of Ky. Hwy. No. 32, the Flemingsburg-Elizaville Road, near the West city limits of Flemingsburg, Fleming County, Kentucky, and more specifically described as follows:

Beginning at a ½ inch rebar and cap (set) in the North right-of-way line of Ky. Hwy. No. 32, said point being 30 ft. from the center of said road and a common corner to Lorene Horton (D.B. 105, Page 274) and J.B. Shannon, et al, the parent tract (D.B. 161, Page 507); thence with the common line of same North 40 deg. 29 min. 17 sec. West, 566.09 ft. to a ½ inch rebar and cap (set) at a cross-fence; thence with new lines of the parent tract and along said cross-fence for the following two (2) calls:

(1) North 60 deg. 18 min. 06 sec. East, 414.25 ft. to a ½ inch rebar and cap (set);

(2) thence North 66 deg. 10 min. 27 sec. East, 295.31 ft. to a ½ inch rebar and cap (set) on the west side of an existing farm road, said point being 60 ft. west of the West property line of Clyde Atherton, et ux (D.B. 195, Page 735); thence continuing with new lines of the parent tract at 60.00 ft. west and parallel with the west property lines of said Atherton for the following two (2) calls:

(1) South 4 deg. 45 min. 43 sec. West, 116.93 ft. to a ½ inch rebar and cap (set);

(2) thence South 1 deg. 20 min. 53 sec. West, 118.54 ft. to a ½ inch rebar and cap (set); thence with another new line of the parent tract at approximately 30 ft. from (west) of the center of aforesaid farm road South 3 deg. 33 min. 53 sec. West, 491.79 ft. to a ½ inch rebar and cap (set); thence 54.12 feet along the arc of a curve to the right to a ½ inch rebar and cap (set) in aforesaid right of way line of Ky. Hwy. No. 32, with said curve having a radius of 35.00 ft. and a chord South 47 deg. 51 min. 35 sec. West, 48.89 ft; thence with Ky. Hwy. No. 32 Right of Way line for the following two (2) calls:

(1) North 88 deg. 21 min. 38 sec. West, 91.71 ft. to a ½ inch rebar and cap (set);

(2) thence North 89 deg. 23 min. 04 sec. West, 91.44 ft. to the point of beginning; containing 6.52 acres.

The grantors reserve in this conveyance a ten (10) ft. wide easement along the East boundary of the above described property for purpose of future construction and maintenance of utilities. See attached plat for depiction of said utility easement. Also included in this conveyance is a non-exclusive easement for ingress and egress to the above described property. Said easement shall extend from Ky. Hwy. No. 32 to the North boundary of this property and shall be the width extending from the East edge of the existing farm road depicted on the attached plat to the East boundary of this conveyance. It is intended that the easement width shall also apply to any modifications or widening of the existing farm road. This description was prepared in conjunction with a Class "A" survey field completed on September 9,

2000 by William T. (Tommy) Carpenter, PLS 2380. A plat depicting that survey (Drawing No. 000-049) is attached hereto and is intended to be a part of this description. The ½ inch x 24 inch re bars set this survey bear a one (1) inch diameter yellow plastic I.D. cap stamped W.T.C., PLS 2380. The bearings stated in this description are referenced to the Magnetic Meridian as noted on said plat. This conveyance is subject to the following conditions and restrictions:

1. The real property described in this deed shall be used for church related purposes only.
2. No mobile, manufactured or modular buildings shall be located on the real property described herein
3. All construction to be erected on the real property described herein shall be of brick veneer, including any garbage or storage buildings constructed on the premises.
4. In the event Second Party does not commence construction of a church building on the premises within two (2) years from the date of this deed, Second Party agrees to reconvey an undivided one-half (½) interest in the above-described property to First Parties, J.B. Shannon and Evelyn Shannon, his wife, who will then return the sum of One Hundred Thirty Thousand Dollars (\$130,000.00) to Second Party. Second Party also agrees to reconvey an undivided one-half (½) interest in the above-described property to Dorothy D. Hurd for no monetary consideration.

The conditions and restrictions set forth above shall be deemed covenants running with the land herein conveyed.

Being the same real property conveyed to James A. Hurd and Dorothy D. Hurd, his wife, and J.B. Shannon and Evelyn Shannon, his wife, from Mabel McKee, et al, by a deed dated the 7th day of April, 1986 and of record in Deed Book 161, Page 507, Fleming County Clerk's Office.

SAVE AND EXCEPT that tract or parcel of land in Deed dated May 20, 2013, recorded May 23, 2013 in Book 250, Page 339, Official Public Records, Fleming County, Kentucky, as being more particularly described as follows:

Being a 1.21 acre portion of property located on the north of KY HWY 32 near the west city limits of the City of Flemingsburg, in Fleming County, Kentucky and being more particularly described as follows:

Beginning at a 1/2" iron pin and cap found (WTC 2380) at the north east corner of the 0.735 acre non-exclusive easement, James A. & Dorothy Hurd & J.B. & Evelyn Shannon DB 161 PG 507 and the Atherton Daughters Revocable Trust Agreement D.B. 242, Page 574; Thence along the Atherton line S 80-43-57 E 199.36' to a 1/2" iron pin end cap found (LS 858), corner to Atherton and Anthony R. & Betsy B. Case D.B. 202, Page 245 (Lot 2 of the WSH Construction Co. D.B. 134, Page 493); Thence along the Case line S 02-33-47 W 255.02' to a 1/2" iron pipe found, corner to Shannon & Hurd Lots 1 & 2, Case and O.P. Kane Jr. D.B. 239, Page 266 (Lot 1 of the WSH Construction Co. D.B. 134, Page 493); Thence along the line of Shannon & Hurd Lots 1 & 2 N 85-25-13 W 202.92' to an iron pin and cap set in the east line of the 0.735 acre non-exclusive easement, corner to said Lots 1 & 2; Thence along the east line of said easement N 03-37-10 E 269.00' to an iron pin and cap set; Thence N 01-34-36 W 2.21' to the point of beginning containing 1.21 acres according to the survey by Travis A. McGlone PLS 3919 of Buffalo Trace Surveying, LLC 4/24/2013. Bearings coordinated to the ½" iron pin and caps found - Adkins LS 838, Atherton Daughters Revocable Trust D.B. 242, Page 574. All iron pin and caps set were ½" x 18" rebar with an orange plastic cap stamped "T. McGlone PLS 3919". Property subject to a 0.735 acre non-exclusive easement for ingress and egress as shown and noted on plat. Property subject to all legal rights of ways, easements and unrecorded conveyances.

THE ABOVE DESCRIBED PROPERTY IS FURTHER SUBJECT TO THE FOLLOWING RESTRICTION, WHICH IS A COVENANT RUNNING WITH THE LAND:

Not more than one permanent dwelling may be located and constructed upon the herein tract of land at any one time and said dwelling shall have a minimum floor size of 1500 square feet and no manufactured or mobile home of any kind may be placed or located upon said premises. Being a portion of the property conveyed to James A. Hurd & Dorothy Hurd and J.B. Shannon and Evelyn Shannon on 7 Day of April, 1986 by survivorship deed from Robert & Jewell McKee, Leslie McKee and James & Virginia Jackson and recorded in the Fleming County Clerk's Office in Deed Book 161, Page 507. James Hurd died testate on 2/7/1997 leaving Dorothy Hurd, his widow, as sole owner of an undivided one-half (½) interest in said premises. Dorothy Hurd died testate on 12/22/2010 leaving the Dorothy D. Hurd Trust as her successor In Interest with said trust now dissolved and the beneficiaries being Steven E. Hurd and

Patricia Atherton, the Granters herein. J.B. Shannon and Evelyn Shannon transferred an undivided one-fourth ($\frac{1}{4}$) interest in said property to the J.B. Shannon Trust, u/a/d March 26, 2001, by deed dated April 23, 2001 and found of record at Deed Book 207, Page 488 of the Fleming County Clerk's Records. J.B. Shannon and Evelyn Shannon further transferred an undivided one-fourth ($\frac{1}{4}$) Interest in said property to the Evelyn F. Shannon Trust, u/a/d March 26, 2001, by deed dated April 23, 2001 and found of record at Deed Book 207, Page 497 of the Fleming County Clerk's Records. The Gary Shannon Trust thereafter being a successor in Interest to the J.B. Shannon Trust u/a/d March 26, 2001.

SAVE AND EXCEPT that tract or parcel of land in Deed dated May 10, 2013, recorded May 23, 2013 in Book 250, Page 244, Official Public Records, Fleming County, Kentucky, as being more particularly described as follows:

Being a 1.21 acre portion of property located on the north side of KY HWY 32 near the west city limits of the City of Flemingsburg, in Fleming County, Kentucky and being more particularly described as follows:

Beginning at a 3/4" iron pipe found at the north right of way of KY HWY 32 and corner to James A. & Dorothy Hurd & J.B. & Evelyn Shannon D.B. 161, Page 507; Thence along the right of way of KY HWY 32 along a curve to the left having a chord bearing and distance of N 84-05-30 W 178.28' and radius of 2387.01' to an iron pin and cap set corner to Lot 1 and the 0.735 non-exclusive easement; Thence leaving the said right of way along the east side of the 0.735 nonexclusive easement along a curve to the right having a chord bearing and distance of N 43-52-51 W 47.47' and radius of 35.00' to an iron pin and cap set; Thence continuing along said easement N 03-37-09 E 222.79' to an iron pin and cap set, corner to Lots 1 & 2 of Shannon and Hurd; Thence along the line of Lots 1 & 2 S 85-25-13 E 202.92' to a 1/2" iron pipe found corner to Lots 1 & 2 of Shannon and Hurd and Anthony R. & Betsy B. Case D.B. 202, Page 245 (Lot 2 of the WSH Construction Co. D.B. 134, Page 493) and O.P. Kane Jr. D.B. 239, Page 266 (Lot 1 of the WSH Construction Co. DB 134 PG 493); Thence along the Kane line S 01-20-59 W 258.78' to the point of beginning containing 1.21 acres according to the survey by Travis A. McGlone PLS 3919 of Buffalo Trace Surveying, LLC 4/24/2013. Bearings coordinated to the 1/2" Iron pin and caps found - Adkins LS 838, Atherton Daughters Revocable Trust D.B. 242, Page 574. All iron pin and caps were 1/2" x 18" rebar with an orange plastic cap stamped "T. McGlone PLS 3919". Property subject to a 0.735 acre non-exclusive easement for Ingress and egress as shown and noted on plat. Property subject to all legal rights of ways, easements and unrecorded conveyances.

THE ABOVE DESCRIBED PROPERTY IS FURTHER SUBJECT TO THE FOLLOWING RESTRICTION, WHICH IS A COVENANT RUNNING WITH THE LAND:

Not more than one permanent dwelling may be located and constructed upon the herein tract of land at any one time and said dwelling shall have a minimum floor size of 1500 square feet and no manufactured or mobile home of any kind may be placed or located upon said premises. Being a portion of the property conveyed to James A. Hurd & Dorothy Hurd and J.B. Shannon and Evelyn Shannon on 7 Day of April, 1986 by survivorship deed from Robert & Jewell McKee, Leslie McKee and James & Virginia Jackson and recorded In the Fleming County Clerk's Office in deed Book 161, Page 507. James Hurd died on 2/7/1997 leaving Dorothy Hurd, his widow, as sole owner of an undivided one-half ($\frac{1}{2}$) interest in said premises. Dorothy Hurd died testate on 12/22/2010 leaving the Dorothy D. Hurd Trust as her successor in interest with said trust now dissolved and the beneficiaries being Steven E. Hurd and Patricia Atherton, the Grantors herein. J.B. Shannon and Evelyn Shannon transferred an undivided one-fourth ($\frac{1}{4}$) interest in said property to the J.B. Shannon Trust, u/a/d March 26, 2001, by deed dated April 23, 2001 and found of record at Deed Book 207, Page 488 of the Fleming County Clerk's Records. J.B. Shannon and Evelyn Shannon further transferred an undivided one-fourth ($\frac{1}{4}$) interest in said property to the Evelyn F. Shannon Trust, u/a/d March 26, 2001, by deed dated April 23, 2001 and found of record at Deed Book 207, Page 497 of the Fleming County Clerk's Records. The Gary Shannon Trust thereafter being a successor in interest to the J.B. Shannon Trust u/a/d March 26, 2001.

Parcel No.: 031-00-00-011.00

TRACT 10:

File No. 305184NCT-5

Earline F. Spencer, widow

TRACT NO. I

A certain tract of land situated in Fleming County, Kentucky, upon the waters of Mud Lick a branch of Johnson Creek and bounded as follows:

BEGINNING at a point upon the north margin of Highway #32, a corner to Brown; thence along the highway fence N 86 1/4 W 1.12 chs. to a post; thence N 89 3/4 W 1.62 chs; thence S 86 1/4 W 1.18 chs.; thence S 82 W 1.85 chs.; thence S 81 W 5.13 chs.; thence S 80 W 1.82 chs.; thence S 79 3/4 W 6.40 chs. to a tree standing near the porch of the tenant house; thence across the porch S 83 W 3 chs. to a post just beyond the spring; thence S 87 W 2.32 chs. to a point 12 feet from the T. E. Grannis corner, a corner to the tract to be conveyed to Dye Spencer; thence with the lines of said tract N 5 E 30.7 chs. to a point 12 feet east of a wild cherry tree standing in the Grannis line; thence continuing parallel with said Grannis line N 4 1/2 E 5 chs. to a point 12 feet from said line, corner to the said Dye Spencer tract; thence with same N 83 E 14.65 chs. To the Brown line; thence with said line S 11 E 35 chs. to the beginning, containing 67.33 acres, more or less.

TRACT NO. II

A certain tract of land situated in Fleming County, Kentucky, upon the head waters of Mud Lick, a branch of Johnson Creek, and described as follows:

BEGINNING at point upon the north margin of Highway No. 32, a corner to T.E. Grannis; thence with his line N 5 E 30.78 chs. to a wild cherry tree in the fence row; thence N 4 1/2 E 31.06 chs. to a set stone corner to same; thence with said T.E. Grannis' line and continuing with a line of H.L. Grannis in all N 86 W 11.57 chs. To a post in the line of the latter and a corner to Mrs. R.T. Kendall; thence with said Kendall's line N 6 E 19 chs. corner to same and in the Lake Williams line; thence with said line N 88 1/2 E 7.72 chs. to a post north of the pool thence N 91/4 E 52 chs. To a post, corner to Claypole; thence with Claypole line S 85 B 9.22 chs. to a post in said line, a corner to Brown; thence with Brown's line S 6 E 39.50 chs. to a post at the turn in the fence; thence S 11 E 4.50 chs. to a point in said Brown's line, a new corner to the tract to be conveyed to Noel Spencer; thence with the line of said tract S 83 W same S 4 1/2 W 5.00 to a point opposite the above mentioned wild cherry tree; thence S 5 W 30.78 chs. to a point upon the north margin of the Highway #32, a corner to said Noel Spencer; thence with the Highway's line S 87 W 18 chs. to the beginning containing 67.33 acres, more or less.

Parcel No.: 030-00-00-030.00

TRACT 11:

File No.: 305184NCT-8

Jeff D. Stephens and Angie B. Stephens, husband and wife

Being a 95.149 acre tract of land located east of Elizaville, west of Flemingsburg and on the north side of Ky Hwy 32 (Elizaville Road) in Fleming County, Kentucky and being more particularly described as follows:

Beginning at a 1/2" iron pin & cap found (J. D. Williams LS 316) at the right of way of Ky Hwy 32, corner to James Sankey Clark DB 213 Pg 32 and corner to J. Brian & Julie A. Clark DB 195 Pg 502; Thence along the line and fence of Clark DB 195 Pg 502 N 03-2S-24 W 950.50' to a fence post found (flagged); Thence continuing along the line and fence of Clark DB 195 Pg 502 N 03-12-17 W 205.60' to an iron pin & cap set at a fence post; Thence N 03-S0-34 W 943.65' to an iron pin & cap set; Thence N 03-50-06 W 604.35' to an iron pin & cap set; Thence N 04-40-22 W (passing an iron pin & cap set at 310.48') a total distance of 315.48' to a fence post in the line of Terry & Gayle Ann Vice DB 233 Pg 264; Thence along the line and fence of Vice N 82-19-38 E 83.83' to an iron pin & cap set at a fence post; Thence continuing along the line and fence of Vice N 01-28-53 E 688.79' to an iron pin & cap set at a fence post corner to Vice & Clark; Thence along said line and fence N 83-58-50 E 975.46' to an iron pin & cap set

new corner to Clark; Thence along the new division line of Clark S 11-46-46 E (passing an iron pin & cap set at 500.00') a total distance of 1005.64' to an iron pin & cap set; Thence continuing along the new division line of Clark S 11-46-46 E 670.57' to an iron pin & cap set new corner to Clark; Thence S 86-37-30 W 359.97' to an iron pin & cap set new corner to Clark; Thence S 10-01-48 E 900.80' to an iron pin & cap set; Thence S 07-49-30 E 977.14' to an iron pin & cap set at a fence post; Thence S 07-49-30 E 102.77' to an iron pin & cap set at the right of way of Ky Hwy 32 (Elizaville Road) new corner to Clark; Thence along the right of way of Ky Hwy 32 S 89-32-12 W 82.29' to a point 45' left of centerline station 34+50; Thence continuing along the right of way of Ky Hwy 32 S 77-43-33 W 90.36' to a concrete right of way marker found 40' left of centerline station 33+60; Thence S 81-44-13 W 513.69'; Thence S 77-55-31 W 300.00' to a point 55' left of centerline station 25+50; Thence S 82-44-03 W 50.50' to a concrete right of way marker found 60' left of centerline station 25+00; Thence S 76-25-34 W 141.67' to the point of beginning containing 95.149 acres according to the survey by Travis A. McGlone PLS 3919 of Buffalo Trace Surveying LLC. 1/4/2013.

All iron pin & caps set were ½" X 8" rebar with an orange plastic cap stamped "T. McGlone PLS 3919."

Bearings coordinated to the Kentucky State Plane Coordinate System, NAD 83 (North Zone).

Property subject to all legal right of ways, easements of record and unrecorded conveyances.

Property subject to oil utilities.

Property subject to existing right of way of Ky Hwy 32 (Elizaville Road) Plan BRS 5215 (9) sheet 4 of 25.
(No Reference Found).

Being a portion of the property conveyed to James Sankey Clark, single, by deed from Lykins Enterprises, Inc. on the 4th day of October, 2002 and recorded at the Fleming County Clerk's Office in Deed Book 213, Page 32.

Parcel No.: 023-00-00-015.02

TRACT 12:

File No.: 305184NCT-11

Mary Denise Vibbert and John Vibbert, her husband

Two certain tracts of land lying and being in Fleming County, and known as the Home Place, and more particularly described as follows:

TRACT I: BEGINNING at a stone in Ida Dorsey Hudson's line, a new corner to the tract to be conveyed to B.G. Dorsey; thence with the line of Mrs. Hudsons S. 5 ¼ W 20.35 chs. to a post corner to same and in R.T. Kendall's line; thence with said line N 84 ½ W 19.17 chs. to a stake corner to same and in a line of the Jesse Kendall farm; thence with said Kendall line and continuing with line of the other tract to be conveyed to W.I. Dorsey, in all 5 ¼ E 20.35 chs. to a stake a new corner to same and to the above mentioned tract to be conveyed to the said B.G. Dorsey; thence with the line of same S 84 ½ E 19.18 chs. to the beginning, containing Thirty Nine (39) Acres. TRACT II: That certain real estate lying and being in Fleming County, Kentucky, on the waters of Johnson Creek, and bounded and described as follows, to-wit:

TRACT II: That certain real estate lying and being in Fleming County, Kentucky, on the waters of Johnson Creek, and bounded and described as follows, to-wit:

PARCEL A: BEGINNING at a stake in Dorsey's line 3 links east of a locust tree, corner to Allen; thence with a line of same N 70 ¼ W 55-2/10 poles to a set stone; thence N 7 E 155-4/10 poles to a set stone in the woods; thence N 71 ½ W 20-4/10 poles to a set stone also in the woods; thence N 7 E 40 poles to a set stone also in the center of the Flemingsburg dirt road and in Liter's line; thence with same S 71 ½ E 70-4/10 poles to a stake in the center of said road and corner to Pitt's land; thence with a line of same 3/4 W 99-6/10 poles to a set stone; thence S 21 ¼ W 36-1/3 poles to another set stone corner to said Pitts and Dorsey; thence with Dorsey's line S 1-3/4 W 64-13/100 poles to the beginning, containing 70 Acres.

PARCEL B: BEGINNING at a point upon the center of the Flemingsburg and Johnson Junction turnpike opposite a set stone on the SW margin of said pike, also near a gate, John F. Dye's outlet to the farm purchased of Samuel Dorsey; thence up the center of the pike S 69 ½ E 99 ½ links to a point in the center of said pike, also a corner to the land said Wallingford bought of John C. Williams; thence S 9 W. 10 chs. & 10 ½ links to a notch in post fence, Walingfords

corner; thence N 69 ½ W 1 chains to a set stone, corner to John F. Dye and C. F. Wallingford; thence N 9 E 10 chains & 10 links to the beginning, containing three quarters of an acre and thirty nine poles.

TRACT III: BEGINNING at an iron pin in the middle of highway opposite the drive way of Mr. & Mrs. Hollis Bradford; thence in a general Southerly direction a distance of 150 feet to a stake; thence at an approximate 90 degree angle parallel to the middle of the highway in a general Easterly direction 300 feet to another stake; thence at an approximate 90 degree angle in a general Northerly direction a distance of 150 feet to the center of the said highway to an iron pin; thence in a general westerly direction following the center of the said highway a distance of 300 feet to the beginning.

Parcel No.: 023-00-00-022.01

TRACT 13:

File No.: 305184NCT-13

Terry Vice and Gayle Ann Vice, husband and wife

Tract 1:

TRACT NO. I: Lying and situated in Fleming Co., Ky., upon the waters of Mud Lick, a branch of Johnson Creek and bounded as follows:

BEGINNING at a set stone corner to the dower; thence with same S 88 E 17.57 chs. to a set stone in Myrtle Farris' line; thence with her line S 2-3/4 E 9.50 chs. to a set stone corner to same; thence S 81 W 1.32 chs. to a stone corner to W.F. Howe; thence with his line N 88 W 15.35 chs. to a set stone corner to W. E. Price; thence with his line N 10 W 10.14 chs to the beginning, containing 17 acres. It is hereby agreed that there is to be a passway 16 feet wide along C.H. Knight's line to the general outlet to the dower.

TRACT NO. II: Situated in Fleming County, Kentucky on the waters of Mud Lick, and bounded as follows:

BEGINNING at a set stone in John F. Dye's line, a corner to the dower; thence with said Dye's line S 70- 1/4 E and continuing with Dorsey Bros. line in all 25.21 chs. to a set stone corner to Mrs. Dorsey; thence with her line S 4 W 8.45 chs. to a newly set stone in Mrs. Dorsey's line, and corner to the tract conveyed to Wm. E. Gary; thence with same S 84 W passing through the spring and against the North side of the old ash tree at the spring 23.15 chs. to a set stone corner to same and in the dower line N 1/2 W 20.90 chs. to the beginning, containing 33 acres, 3 quarters and 33 poles. The outlet to the above described land is along the line of Jno. F. Dye and over the land of the dower to the general outlet of said dower and thence with it to the turnpike.

TRACT NO. III: Situated in Fleming County, Kentucky, upon the waters of Johnson Creek and bounded as follows:

BEGINNING at a corner to the post on South side of the Knight farm; thence in a passway, southern direction to a set stone in the line of said Knight farm and corner to a tract of land belonging to Opal K. Gifford; thence in an Eastern direction with said tract to a set stone corner to Gano Hendrix; thence in a northern direction with his line and continuing with a tract of Opal K. Gifford to a set stone in Dye's line; thence with their lines in a western direction to a post at a turn in the fence; thence to another post where a large stump once stood and near the edge of the pond; thence to a point near the gatepost on the north side of the outlet; thence down the center of the lane crossing the Johnson and Elizaville pike to a point in Riley's field half-way between a set stone, corner to J. Frank Dye, and the line of the Knight farm; thence to said Knight line; thence in an eastern direction recrossing the pike with said line and along the south side of the line to the beginning, containing 42 acres, more or less.

Being the same real estate in which an undivided one-half (1/2) interest was conveyed G.C. Vice and Wanda M. Vice, husband and wife, and an undivided one-half (1/2) interest was conveyed Terry Vice, then single, by deed from Torn MacDonald and Janet MacDonald, husband and wife, dated the 24th day of February, 1993, and of record in Deed Book 176, Page 298, Fleming County Clerk's Office. Gayle Ann Vice is the present spouse of Terry Vice.

Parcel No.: 023-00-00-015.00

TRACT 14:

Steven Dale Brown and Karen J. Brown, his wife

William D. Brown and Laura Suit Brown, his wife

A certain tract of land situated in Fleming County, Ky., upon the waters of Johnson Creek and along the north side of State Highway No. 32 and bounded as follows:

BEGINNING at a point in the line of the highway at a small locust tree, corner to the remaining Spencer land, thence with the lines of the highway S. 87 E. 3.80 chs. thence S. 81-1/2 E. 1.56 chs. to a post east of the gateway a corner to Mrs. Margaret Ryans; thence leaving the highway with her lines N. 9-1/2 W. 2.75 chs. to a post thence N. 79-1/2 E. 19.72 chs. to a post in an old road, corner to said Mrs. Ryans and Frank Dodge; thence with Dodge line N. 83-114 E. 4.34 chs. to a small hackberry tree; thence N. 88-1/4 E. 3:77; chs. to another post; thence N. 9 W: 4.10 chs. to a post; thence N. 74 E. 8 links to a post in said Dodge line and corner to the Dudley land now owned by Nobel McKee; thence with said land N. 38-1/4 W. 40.37 chs. to a post; thence N. 11-1/2 W. 19.35 chs. to a post corner to the George Hurst land; thence with said land and continuing with Claypoole farm in all N. 3-1/2 E.-15.54 chs. to a post, corner to same; thence N. 85 W. 15.92 chs. to a post in line of same end a new corner to the Spencer land; thence with said Spencer land S. 6 E. 39.50 chs. to a stake another new corner; thence S. 11-1/4 E. 39.50 chs. to the beginning containing 150 acres.

THERE IS EXCEPTED AND NOT CONVEYED HEREIN that 1.2050 Acre parcel of land retained by the Glenn T. Brown and Oliva Fant Brown a/k/a Sally S. Brown Trust, which property is more particularly described as follows:

A certain parcel or tract of land lying or situated on the North side of Ky. Hwy. No. 32, the Flemingsburg-Carlisle Road, located 1.68 miles west of the Flemingsburg Bypass at Flemingsburg, Fleming County, Kentucky and more specifically described as follows:

BEGINNING at a 1/2 inch rebar and cap (set) in the North Right of Way line of Ky. Hwy. No. 32, said point being 30 ft. from the center of said road and a corner to Daniel Suit, et ux (D.B. 164, Page 355); thence with said Right of Way line for the following five (5) chords: (1) North 74 Deg. 37 Min. 37 Sec. West, 39.97 ft.; (2) thence North 77 deg. 52 Min. 07 Sec. West, 40.00 ft; (3) thence North 80 Deg, 32 Min. 20 Sec. West, 39.99 ft.; (4) thence North 81 Deg, 30 Min. 22 Sec. West, 39.99 ft.; (5) thence North 82 Deg, 36 Min. 41 Sec. West, 54.31 ft. to a 1/2 inch rebar and cap (set), said point a new corner to the parent tract of Glen T. Brown, et ux (D.B. 113, P. 165); thence with new lines of the parent tract and along the existing board fence for the following five (5) calls: (1) North 8 Deg. 33 Min. 01 Sec. East, 288.90 ft. to a corner post; (2) thence South 81 Deg. 02 Min. 24 Sec. East, 166.37 ft. to a corner post; (3) thence South 6 Deg. 47 Min. 04 Sec. West, 75.79 ft. to a corner post; (4) thence South 16 Deg. 33 Min. 23 Sec. West, 17.86 ft. to a corner post; (5) thence South 1 Deg. 52 Min. 53 Sec. East, 21.94 ft. to a corner post, said point another corner to aforesaid Suits; thence with the line of Suits and continuing along the board fence South 5 Deg. 08 Min. 15 Sec. East, 184.67 ft. to the Point of Beginning; Containing 1.2050 Acres.

This is from a survey performed by W. T. (Tommy) Carpenter, Reg. Land Surveyor No. 2380, on August 31, 1992. The 1/2 inch rebars set this survey bear a plastic I.D. cap stamped W.T.C., RL.S. 2380.

There is also transferred herewith an easement across the land retained herein for ingress and egress 30 feet in width along the currently existing driveway leading from the right of way of Kentucky 32 to the property conveyed herein. The centerline of the easement shall be the center of the currently existing driveway. Being the same property in which Oliva Smith Brown as Trustee of the Glen Thomas Brown and Oliva Smith Brown, a/k/a Sally S. Brown Trust, and Oliva S. Brown, a single person, conveyed a 1/5th interest each to Steven Dale Brown and William D. Brown by deeds dated December 30, 2004, recorded in Deed Book 221, Page 228, and April 15, 2005, recorded in Deed Book 222 Page 406; also being the same property in which Wayne Thomas Brown, et al, conveyed the remaining 3/5th interest in the property to Steven Dale Brown and Karen J. Brown, his wife, and William D. Brown and Laura Suit Brown, his wife, by deed dated April 15, 2005, and recorded in Deed Book 222 Page 416 all of record in the Fleming County Clerk's Office.

Parcel No.: 030-00-00-044.00

APPENDIX C
Noise and Traffic Study



Fleming County Solar Project: Noise and Traffic Study

NOVEMBER 2020

PREPARED FOR

AEUG Fleming Solar, LLC

PREPARED BY

SWCA Environmental Consultants

FLEMING COUNTY SOLAR PROJECT: NOISE AND TRAFFIC STUDY

Prepared for

AEUG Fleming Solar, LLC

50 E Monroe St
Chicago, IL 60603
Attn: Mark Randall

SWCA Environmental Consultants

201 Chatham Street, Suite 3
Sanford, North Carolina 27330
(919) 292-2200
www.swca.com

SWCA Project No. 63271

November 2020

CONTENTS

1	Introduction	1
2	Compatibility with Scenic Surroundings	1
2.1	Existing Noise Conditions	1
2.1.1	Nearest Receptor Sites	1
3	Traffic Study	9
3.1	Existing Road Network and Traffic Conditions	9
3.3	Operational and Maintenance Traffic	11
3.4	Traffic Summary and Conclusions	11
4	Fugitive Dust Impacts	11
5	Impacts to Rail.....	12
6	References	13

Appendices

- A. Figures
- B. Noise Impacts Calculations
- C. Fugitive Dust Calculations

Tables

Table 2.1-1.	Nearest Sensitive Receptor to the Site.....	2
Table 2.1-2.	Representative Existing Conditions Based on Land Use.....	2
Table 2.1-3.	Typical Sound Levels Measured in the Environment and Industry.....	3
Table 2.2-1.	Noise Levels for Common Construction Equipment.....	5
Table 2.3-1:	Noise Levels Due to Inverter Operation.....	7
Table 2.4-1.	Calculated Noise Levels at Nearest Receptor Due to Construction	8
Table 2.4-2.	Calculated Noise Levels at Property Boundary Due to Operation	9
Table 3.1-1:	Access Road Information	10
Table 3.2-1.	Summary of Anticipated Construction Vehicle Trips	10

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1 INTRODUCTION

1.1 Project Description

The proposed Fleming Solar Facility (Project) is a 188-megawatt photovoltaic (PV) facility in Fleming County, Kentucky. The facility is located approximately three miles west of Flemingsburg on the north side of KY-32, with a smaller separate portion northwest across KY-170, sitting on approximately 1,590 acres of land. The power generated by the proposed solar facility will be connected to the existing power grid using the transmission line currently traversing the tract. The generating facility will sell power on the wholesale market as a merchant power plant or independent power producer. A Project Location Map is shown in Figure A-1.

Construction of the facility is anticipated to last approximately eleven months, commencing in September of 2021 and ending in July of 2022. Based on the preliminary design, the Project will include approximately 73 inverters, 510,300 modules, and 4,725 trackers. The Project will also include a substation, warehouse and O&M Building to be located near the eastern property boundary.

The site would be secured using six-foot-high chain-link fencing topped by barbed wire surrounding the perimeter of the PV system and substation. The entrance gates for the site are anticipated be about eight feet high and twelve feet wide, to allow for fire department and maintenance access. All fencing would be placed at or above grade to ensure drainage flows are unobstructed. Naturally occurring vegetation around the boundary, most notably small groupings of deciduous trees along the east boundary of the larger eastern portion and along the south boundary of the northwest portion, would remain in place. At the end of life of the project, the land will likely return to farmland.

1.2 Existing Land Use and Site Conditions

According to the National Land Cover Database (NLCD) for Fleming County, the land upon which the facility will be built is largely farmland, consisting of land cover characterized as hay/pasture and cultivated crops, and patches of deciduous forest as shown in Figure A-2. Based on aerial imagery from Google Earth, there are approximately twelve ponds within the property boundary in the larger portion and one pond within the property boundary in the smaller northwest portion. There are also various buildings near the major roads on the north and south side of the site, KY-559 and KY-32, respectively, as shown in the aerial imagery of Figure A-3. The southeast corner borders a small residential community, including a school and a church as well a number of small commercial properties.

2 COMPATIBILITY WITH SCENIC SURROUNDINGS

2.1 Existing Noise Conditions

2.1.1 *Nearest Receptor Sites*

Noise-sensitive receptors generally are defined as locations where people reside or where the presence of unwanted sound may adversely affect the existing land use. Typically, noise-sensitive land uses include residences, hospitals, places of worship, libraries, performance spaces, offices, and schools, as well as nature and wildlife preserves, recreational areas, and parks. The solar structures are approximately 35 feet from the Project boundary at the closest points. The closest receptor to any structure, a grouping of residences along KY-559, will be approximately 265 feet from the nearest solar panel and approximately

739 feet from the nearest inverter. These residences will be within 200 feet of the property boundary. A further list of the nearest sensitive receptors and their proximity to the property boundary, nears solar structure, and transformer or inverter is listed in Table 2.1-1.

Table 2.1-1. Nearest Sensitive Receptor to the Site

Type	Direction from Project Site	Distance from Property Boundary	Distance from Nearest Solar Panel	Distance from Nearest Inverter or Transformer
Residences – numerous	Along the north side of the property boundary	Within 157 ft	Within 265 ft	Within 739 ft
Residences – small community	Southwest of Northwest portion	Within 139 ft	Within 212 ft	Within 1,505 ft
Residences – small community	Southeast side of property boundary	Within 305 ft	Within 335 ft	Within 1,112 ft
Place of Worship – Flemingsburg Baptist Church	Southeast side of property boundary	Within 70 ft	Within 1,903 ft	Within 2,533 ft
School – Fleming County High School	Southeast side of property boundary	Within 750 ft	Within 1,800 ft	Within 2,407 ft

2.1.2 Existing Noise from Surrounding Areas

Community sound levels are generally presented in terms of A-weighted decibels (dBA). The A-weighting network measures sound in a similar fashion to how a person perceives or hears sound, thus achieving a strong correlation with how people perceive acceptable and unacceptable sound levels.

A-weighted sound levels are typically measured or presented as the equivalent sound pressure level (L_{eq}), which is defined as the average noise level on an equal-energy basis for a stated period of time and commonly is used to measure steady-state sound that is usually dominant. Another metric used in determining the impact of environmental noise is the differences in response that people have to daytime and nighttime noise levels. During the evening and at night, exterior background noises generally are lower than daytime levels. However, most household noise also decreases at night, and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are sensitive to intrusive noises. The L_{dn} is a noise metric that accounts for the greater annoyance of noise during the nighttime hours (10:00 p.m. to 7:00 a.m.).

Local conditions such as traffic, topography, and winds characteristic of the region can alter background noise conditions. In general, the L_{dn} sound levels for outdoor quiet urban nighttime noise range from 40 to 50 A-weighted decibels (dBA) (EPA 1974). The American National Standards Institute (ANSI 2013) has published a standard with estimates of general ambient noise levels (L_{eq} and L_{dn}) based on detailed descriptions of land use categories (ANSI 2013). The ANSI document organizes the land use based on six categories. The descriptions and estimated daytime and nighttime L_{eq} ambient noise levels for each category are provided in Table 2.1-2.

Table 2.1-2. Representative Existing Conditions Based on Land Use

Land Use Category	Typical L_{dn} (dBA)	Day Level, L_d (dBA)	Night Level, L_n (dBA)
1. Very noisy urban residential	67	66	58
2. Noisy urban residential	62	61	54
3. Urban and noisy suburban residential	57	55	49

Land Use Category	Typical L _{dn} (dBA)	Day Level, L _d (dBA)	Night Level, L _n (dBA)
4. Quiet urban and normal suburban residential	52	50	44
5. Quiet suburban residential	47	45	39
6. Very quiet suburban and rural residential	42	40	34

Source: ANSI S12.9-2013/Part 3

The Project area can be defined as a sparse suburban or rural area with very few (if any) near sources of sound; therefore, background sound levels are conservatively represented by those of *Category 6: Very quiet suburban and rural residential*. Thus, the majority of the analysis area would be expected to have background noise L_{dn} of about 40 dBA or less. This noise level would occasionally increase due to passing vehicular traffic from KY-559 and KY-32. There are also temporary increases in the existing noise level from farm equipment (e.g., tractors) used to grow and harvest crops and to raise cattle and other farm animals. No commercial or industrial sources were identified in the analysis area.

The City of Flemingsburg Noise Regulation (Chapter 98, 2020) prohibits “excessive noise,” but does not provide specifics that pertain to this project. No other relevant county or state noise ordinance were found.

In 1974 the U.S. EPA published “Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin on Safety”. In this publication, the U.S. EPA evaluated the effects of environmental noise with respect to health and safety and determined an L_{dn} of 55 dBA (equivalent to a continuous noise level of 48.6 dBA) to be the maximum sound level that will not adversely affect public health and welfare by interfering with speech or other activities in outdoor areas. Since no other local, county, or state thresholds were identified, an L_{dn} of 55 dBA has been used to determine if the Project would adversely affect public health and welfare.

2.1.3 Existing On-Site Noise

The existing on-site noise conditions are anticipated to be largely those due to farming and agricultural activities. These include trucks, tractors, and typical farming equipment. Other likely noises are those due to livestock and other wild animals in the area such as birds, frogs, and insects.

The general human response to changes in noise levels that are similar in frequency content (such as comparing increases in continuous [Leq] traffic noise levels) are summarized as follows:

- A 3-decibel (dB) change in sound level is considered to be a barely noticeable difference.
- A 5-dB change in sound level typically is noticeable.
- A 10-dB increase is considered to be a doubling in loudness.

Community sound levels are generally presented in terms of dBA. The A-weighting network measures sound in a similar fashion to how a person perceives or hears sound, thus achieving a strong correlation with how people perceive acceptable and unacceptable sound levels. Table 2.1-3 lists A-weighted sound levels and the general subjective responses associated with common sources of noise in the physical environment.

Table 2.1-3. Typical Sound Levels Measured in the Environment and Industry

Noise Source at a Given Distance	Sound Level in A-weighted Decibels (dBA)	Qualitative Description
Carrier deck jet operation	140	
Civil defense siren (100 feet)	130	Pain threshold

Noise Source at a Given Distance	Sound Level in A-weighted Decibels (dBA)	Qualitative Description
Jet takeoff (200 feet)	120	Deafening
Auto horn (3 feet), Pile driver (50 feet), Rock music concert environment	110	Maximum vocal effort
Jet takeoff (100 feet), Shout (0.5 foot), Ambulance siren (100 feet), Newspaper press (5 feet), Power lawn mower (3 feet)	100	
Heavy truck (50 feet), Power mower, Motorcycle (25 feet), Propeller plane flyover (1,000 feet)	90	Annoying; Hearing damage (8-hour, continuous exposure)
Pneumatic drill (50 feet), Garbage disposal (3 feet), High urban environment	80	Very loud
Passenger car, 65 mph (25 feet), Living room stereo (15 feet), Vacuum cleaner (3 feet)	70	Loud/Intrusive (telephone use difficult)
Air conditioning unit (20 feet), Human voice (3 feet), Department store environment	60	
Light auto traffic (50 feet), Residential air conditioner (50 feet), Private business office environment	50	Moderate/Quiet
Living room/Bedroom, Bird calls (distant)	40	
Library Soft whisper (5 feet), Quiet bedroom environment	30	Very quiet
Broadcasting/Recording studio	20	Faint
	10	Just audible
	0	Threshold of human audibility

Source: Adapted from Table E, "Assessing and Mitigating Noise Impacts" (New York Department of Environmental Conservation 2001) and *Handbook of Environmental Acoustics* (Cowan 1993).

2.2 Proposed Construction Noise Conditions

2.2.1 Equipment and Machinery

Construction noise levels were estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (RCNM 2011). The RCNM is FHWA's national model for the prediction of construction noise. This software is based on actual sound level measurements from various equipment types taken during the Central Artery/Tunnel Project conducted in Boston, Massachusetts, during the early 1990s.

Estimates of noise from the construction of the access roads and improvements to the access roads are based on a roster of the maximum amount of construction equipment used at the facility on a given day. Table 2.2-1 lists typical construction equipment and the noise level at 50 feet. The RCNM has noise levels for various types of equipment pre-programmed into the software; therefore, the noise level associated with the equipment is typical for the equipment type and not based on any specific make or model.

The RCNM assumes that the maximum sound level for the Project (L_{max}) is the maximum sound level for the loudest piece of equipment. The approximate noise generated by the construction equipment used at the proposed Fleming Solar Project site has been conservatively calculated based on the maximum amount of construction equipment that will be used at the Project site at one time, and not taking into account further attenuation due to atmospheric interference or intervening structures. Results of the RCNM construction noise calculations are given for the facility in Section 2.4, with calculations shown in Appendix B.

Construction of the facility is expected to commence in September of 2021 and be completed in July of 2022. The noisiest phase of construction is anticipated to be the foundations phase due to piledriver use and would last from November of 2021 to June of 2022 with planned pauses the weeks of November 29, 2021; December 27, 2021; and January 3, 2022. It should also be noted that there will be 10-week period from March to May of 2022 when all six major construction phases will be in progress concurrently. Foundations/Poles would be the loudest activity during this time. While other construction activities may be occurring during this period, construction work is expected to progress across the site such that equipment and activities would only be in a single area for a short period of time. Given this, the potential for adverse impacts at any one receptor is expected to only occur for a short period of time.

Table 2.2-1. Noise Levels for Common Construction Equipment

Equipment Type	Typical Maximum Noise Levels at 50 Feet (dBA)
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Chainsaw	85
Compactor	82
Crane Derrick	88
Crane Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Pickup Truck	55
Pile Driver (Impact)	101
Pile Driver (Sonic)	96
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85

Equipment Type	Typical Maximum Noise Levels at 50 Feet (dBA)
Tractor	84
Truck	88
Welder/Torch	73

Source: Federal Highway Administration (FHWA). 2011. Roadway Construction Noise Model (RCNM). Software Version 1.1. Table based on EPA Report and measured data. Exact noise levels may vary depending on manufacturer and model.

2.2.2 Roadway Noise During Construction

Construction of the facility is expected to temporarily increase local traffic. This is discussed with greater detail in Section 3. It is anticipated that there will not be need for extensive construction during the night hours (10 pm – 7am), and therefore there will be limited noise during the night hours due to construction of this facility. In addition, the loading and unloading of equipment is not anticipated to occur between 10 pm and 7 am and would occur several hundred feet inside the property boundary.

2.2.3 Assembly of Solar Array and Construction Facilities

Construction may require small gas-powered generators to power hand tools and gas-powered welders to assemble the steel portions of the tracking system and for general assembly of the electrical equipment associated with the solar facility and substation. This will occur during normal business hours approximately 35 feet within the Project boundary at the closest distance. Any noise that would be created by the assembly activities is anticipated to be temporary (short in duration) and transient in nature (moving across the site as construction progresses).

2.3 Proposed Operation Noise Conditions

2.3.1 Solar Array and Tracking System

The solar array associated with this Project includes single-axis tracking panels distributed evenly across the site. Tracking systems involve the panels being driven by small, 24-volt brushless DC motors to track the arc of the sun to maximize each panel’s potential for solar absorption. Panels would turn no more than five (5) degrees every 15 minutes and would operate no more than one (1) minute out of every 15-minute period. These tracking motors are a potential source of mechanical noise and are included in this assessment. The sound power typically produced by panel tracking motors (NexTracker or equivalent) is approximately 78 dBA. For reference, that equates to a sound pressure level of 47 dBA at 10 meters distance.

2.3.2 Inverters

This facility design consists of approximately 73 inverters. The facility is divided into A, B and C blocks, with A blocks planned to hold two (2) inverters each, and B and C planned to hold one (1) based on the preliminary design. This is subject to change. The site layout currently has plans for 33 A blocks, 3 B blocks and one C-block. Table 2.3-1 below, is a summary of the inverters to be onsite and their respective noise levels. A-block and B-block inverters will be Ingecon Sun 1600TL and C block inverter will be Sun Grow SG3150U-MV models. It is assumed that the two inverter types will operate with approximately the same noise levels. Figure A-3 displays the location of each inverter based on the preliminary design.

Table 2.3-1: Noise Levels Due to Inverter Operation

Inverter Type	Number	Typical Maximum Noise Levels at 10 Meters (dBA)
Ingecon Sun 1600TL	72	<66
Sun Grow SG3150U-MV	1	<66

Source: Ingeteam Power Technology, S.A. 2020.

According to the manufacturer’s specifications, the noise emission produced by the inverter is less than 66 dBA at a distance of 10 meters. The noise produced by the inverter can be described as a hum and has roughly the same noise output of a household air conditioning unit.

2.3.3 Transformers

The transformer to be used is a 240 MVA ONAF2 with 650 kV BIL. It is located within the planned substation, which is anticipated to cover approximately 1.4 acres on the east side of the facility. The transformer is anticipated to be the loudest noise-generating operational equipment with noise emissions rated at 85 dBA sound power (National Electrical Manufacturers Association, 2019). For reference, that equates to a sound pressure level of 54 dBA at 10 meters distance. The nearest sensitive receptor to the transformer is a residence approximately 1,600 feet south.

2.3.4 Site Operation and Maintenance

2.3.4.1 VEHICULAR TRAFFIC

The operation of the Fleming County Solar Facility is expected to have a maximum of eight (8) people on staff, normally working Monday through Friday, 7:00AM – 3:30PM, but will change shifts as needed to perform some planned maintenance at night. There will also be an On-Call schedule to respond to any corrective maintenance that is impacting production.

Maintenance activities may also be conducted at night up to 30 days a year. While dispatches are not anticipated on weekends, they remain a possibility in the event of a component outage that would require timely repair in order to limit production impact from the site. Maintenance employees would drive to the facility in mid- or full-sized trucks and will contribute less to traffic noise than a typical single-family home. With the exception of the scenarios mentioned above, vehicular traffic on the Project site will be limited to typical weekday work hours.

2.3.4.2 MAINTENANCE ACTIVITIES

Photovoltaic facilities contain very few moving parts and have limited ongoing maintenance requirements. Maintenance activities would consist of checking electrical performance parameters via remote monitoring, performing periodic inspections and maintenance of transformer and inverters, responding to any problems detected by remote monitoring, conducting weed abatement, mowing grass cover, performing dust control activities, cleaning PV panels, and maintaining all-weather access roads. Water would be used for cleaning PV panels and controlling dust, but no water would be used by the facility for the production of electricity. No major equipment is anticipated to be required for maintenance of the facility except as necessary for maintenance of all-weather access roads.

2.4 Noise Summary and Conclusions

The construction of the facility will likely cause an increase in noise during daylight hours due to the use of heavy equipment, power tools, and vehicular traffic entering and leaving the site.

The RCNM was used to estimate the maximum sound level for the loudest pieces of equipment during the pole setting activities. The approximate noise generated by the construction equipment used at the site has been conservatively calculated based on the maximum amount of construction equipment that will be used at the Project site at one time, and not taking into account further attenuation due to atmospheric interference or intervening structures. The equipment used for the calculations included cranes, vibratory pile drivers, pickup trucks, front end loaders, and trenchers. Results of the RCNM construction noise calculations are given for the facility in Table 2.4-1.

Table 2.4-1. Calculated Noise Levels at Nearest Receptor Due to Construction

	Calculated L_{max} (dBA)	Calculated L_{eq} Total (dBA)
Noise Level at Nearest Receptor	89.5	82.9

No local, county, or other ordinances, that limit construction noise levels for the Project were identified. Construction activities at the Project site would move around the site and are not anticipated to be performed proximate to a sensitive receptor more than a few days or weeks. The calculated L_{max} is a conservative estimate based on the instantaneous worst-case noise level. Construction will be short term and any noises due to construction will be transient. Limited construction activities may occur before/after daylight hours.

The pole installation is anticipated to be the loudest activity and is based on three pole setting crews working simultaneously within a single block. It is assumed that the construction equipment for one crew will be operating at the block boundary closest to the considered receptor. The other two crews are assumed to be operating at the location of the proposed inverter for that block. The nearest sensitive receptor is located 139 feet from the nearest solar panel.

For the construction phase of the proposed Project, predictive noise modeling has considered the range of potential impacts likely noting that noise generating activities will progressively move across the site over the duration of construction. As such, the highest noise levels would not be expected to be experienced at a single receptor for more than one day while construction equipment (e.g. piling drill rig) is at the closest point to the receptor. At the closest receptor, the calculated noise level during construction is 82.9 dBA (L_{eq}). An isopleth of the construction noise anticipated for the Project is provided as Figure A-5.

For noise generated by the operation of the Project, standard acoustical engineering methods were used and were based on vendor-supplied equipment noise levels, and results are shown in Table 2.4-2. These noise levels were based on inverters, trackers, and transformers specified in the preliminary design. Predicted levels at the closest sensitive receptor were calculated based on geometric spreading attenuation using International Organization for Standardization (ISO) 9613-2, Acoustics – Sound Attenuation during Propagation Outdoors (ISO 1996). Additional attenuation factors, such as noise-reducing intervening terrain, structures, and barriers cannot be considered with this methodology. Thus, this methodology is conservative. In addition, because solar panels produce power only when the sun is shining, the trackers will be silent at night. It was assumed that reactive power will be produced at night; therefore, inverters, and transformers were assumed to emit noise at the same levels as during daytime hours. Central inverters

are usually surrounded on all sides by the solar panel arrays whose electricity they manage, which further distances them from anyone who might happen to be nearby and would potentially act as a noise buffer.

The “as proposed” scenario L_{dn} at the nearest sensitive receptor, a residence on the north side of the Project 739 feet from the nearest inverter, is estimated to be 54.8 dBA L_{dn} , which is below the EPA’s recommended 24-hour average day and night value of 55 dBA L_{dn} (EPA 1974).

The maximum worst-case scenario value, estimated under the assumption all pieces of equipment are operating simultaneously and that all the inverters are located at a minimum distance of 985 feet (300 meters) from any sensitive receptor, is below the EPA’s recommended value, approximately 54.7 dBA L_{dn} . Therefore, the Project does comply with the EPA’s recommendation.

The average sound level (L_{Aeq}) would be 9.9 dBA higher than the current estimated ambient noise levels for the area, which would be perceived by humans as approximately a doubling of sound level (Bies and Hansen 1988).

Table 2.4-2. Calculated Noise Levels at Property Boundary Due to Operation

	Calculated L_{eq} Total (dBA)	Community Noise Level (dBA)		
		L_{day}	L_{night}	L_{dn}
Estimated Ambient Noise Level *	--	40.0	34.0	42.0
Noise Level at Property Boundary – As proposed	67.1	67.2	67.1	73.6
Noise Level at Nearest NSA – As proposed **	48.6	48.8	48.3	54.8
Nearest NSA – Worst case condition ***	48.5	48.7	48.2	54.7

* ANSI S12.9-2013/Part 3

** Noise levels were estimated assuming the equipment locations as proposed in the Project layout. Presented values correspond to the maximum cumulative noise levels for all the evaluated NSAs. The nearest residential sensitive receptor is located approximately 157 feet from the property boundary and approximately 739 feet from the nearest inverter.

*** Noise levels were estimated assuming the inverters were located at a minimum distance of 985 feet (300 meters) from the block boundary closest to the considered receptor. Presented values correspond to the maximum cumulative noise levels for all the evaluated NSAs. The maximum noise level corresponds to a residential receptor located approximately 220 feet north of the property boundary and approximately 985 feet from the nearest inverter.

The loudest noise-generating operational equipment will consist of inverters, trackers, and transformers. No operational components of the Project include significant ground borne noise or vibration sources, and no significant vibrations sources currently exist, or are planned, in the area. Thus, no significant ground borne vibration impacts would occur with operation of the Project. In addition, blasting would not be required as part of the Project.

3 TRAFFIC STUDY

3.1 Existing Road Network and Traffic Conditions

The anticipated routes for construction equipment, materials deliveries, and construction and operation crews to access the Project site consist of the existing roads that are adjacent to the site and the existing roads that would be used to access Flemingsburg and Maysville (see Figure A-1). The major roads to be used to access the facility are anticipated to be KY-32, KY-559, KY-11, and KY-170. KY-32 would provide access from Flemingsburg and runs east and west along the south of the facility. KY-559 would be a second route to access the facility from Flemingsburg, running east and west on the north side of the facility. KY-11 is expected to be used to give access to Maysville in the north and also towns to the south,

including Owingsville, Mt. Sterling, and Lexington. KY-11 runs north and south and connects with KY- 32 and KY-559 on the west side of Flemingsburg. KY-170 is expected to be used to give access to the northwest portion of the facility. KY-170 is a two-lane road that runs north and south and connects with KY-32 and KY-559 on the west side of the facility. Table 3.1-1 below provides further details on each road that would be used to access the site.

Table 3.1-1: Access Road Information

Access Road	Number of Through-lanes	Closest Milepoint to Property Line	Distance (ft) and Direction to Property Line from Closest Milepoint	Average Daily Traffic*	Lane Width (ft)	Shoulder Width (ft)
KY-32	2	Milepoint 8.2	540 feet North	5,318 (2019 estimate)	10	N/A
KY-559	2	Milepoint 0.8	50 feet South	147 (2018 estimate)	8	N/A
KY-11	2	Milepoint 11.8	2,350 feet East	3,047 – 7,927 (2016 estimate)	12	12
KY-170	2	Milepoint 8.2	685 feet west (Northwest portion)	482 (2018 estimate)	10	N/A

*Kentucky Transportation Cabinet 2020

3.2 Construction Traffic

Any entrances to the facility would likely be on KY-32 on the south side of the facility or KY-559 on the north side. There are multiple dirt roads leading to the site from either road that may lead to a site entrance, depending on construction of the facility. These potential access points are identified on the General Layout provided in Appendix E of the Site Assessment Report. Traffic is expected to increase during construction, with a morning and afternoon peak due to workers entering and leaving the site as well as deliveries occurring throughout the day.

The construction of the proposed solar facility is expected to take approximately eleven months for completion. During construction, a temporary increase in traffic volume associated with travel of construction laborers, delivery of construction equipment and material, delivery of solar panel components and equipment is anticipated. Laborer commutes with passenger vehicles and trucks will occur daily with two traffic peaks (i.e., morning peak and afternoon peak), whereas deliveries of equipment will occur on trailers, flatbeds, or other large vehicles periodically throughout the construction process at various times of day. A summary of the anticipated construction vehicle trips per day are included in Table 3.2-1.

Table 3.2-1. Summary of Anticipated Construction Vehicle Trips

Construction Vehicle Type	Vehicle Trips Per Day (avg.)	Vehicle Trips Per Day (Max.)
Employee Passenger Vehicles	40	90
Heavy-Duty Delivery Trucks	8	16
Light-Duty Delivery Trucks	2	5
Water Trucks	1	5

3.2.1 Traffic Safety Precautions

Permanent road or lane closures are not anticipated for the construction of the solar facility. Construction of the facility is not expected to impact roads, but safety precautions including signage, signaling, flagmen, and temporary lane closures may be utilized as needed. For example, during a delivery, flagmen may be used to temporarily stop traffic to allow the delivery driver to turn into the facility safely, with signage used to warn oncoming traffic of the lane closure.

3.2.2 Impact on Road Infrastructure

Construction of the facility is not expected to have any significant impact on road infrastructure other than increased wear due to increased traffic at the possible entrances on KY-32 on the south side of the site and KY-559 on the north side. Any impact to the road due to construction of the facility will be repaired.

Access drives and internal roads will be constructed or improved as needed to accommodate appropriate vehicles and equipment to construct the proposed solar facility. Internal roads will be compacted gravel, which may result in an increase in airborne dust particles. During construction, water may be applied to internal road system to reduce dust generation.

3.3 Operational and Maintenance Traffic

The facility will be manned during normal business operation with eight (8) people on staff, normally working Monday through Friday, 7:00AM – 3:30PM, but will change shifts as needed to perform some planned maintenance at night. There will also be an On-Call schedule to respond to any corrective maintenance that is impacting production. It is anticipated that workers making site visits will be in mid-to full-size trucks, accounting for less vehicle traffic than an average single-family home. During operation, workers are not anticipated to create a significant impact on local traffic and will generally be entering and leaving on normal weekdays during daylight hours.

3.4 Traffic Summary and Conclusions

During construction of this facility, traffic is anticipated to increase, with morning and evening peaks for daily workers and deliveries being made to the site periodically. All necessary safety precautions, including use signage and flagmen, will be taken to best ensure collisions are prevented on the surrounding roads. There are not anticipated damages to the existing road infrastructure. Operation of the facility is not expected to cause a significant impact to local traffic as the expected traffic to be contributed to the area will be similar to that of a typical single-family home.

4 FUGITIVE DUST IMPACTS

The proposed facility will only have minimal fugitive dust during construction. The facility will be constructed within the existing contours and topography of the land. For those limited areas that are cleared and grubbed, water trucks are anticipated be employed to keep dust to a minimum, authorized by Section 1.2 of the Kentucky Pollutant Discharge Elimination System (KPDES) as a non-stormwater discharge (KPDES 2018).

The earthmoving activities during the Civil Works phase required for the site are anticipated to last from October of 2021 to May of 2022. The total acres disturbed is assumed to be approximately 397.5, which is estimated as 25% of the total facility acres. It is estimated that over the course of construction there will

be 11.94 tons of PM₁₀ (particulate matter 10 microns or less in diameter) released and 1.19 tons of PM_{2.5} (particulate matter 2.5 microns or less in diameter) released due to fugitive dust. Calculations for fugitive dust emissions were based on the emission factors provided in the WRAP Fugitive Dust Handbook (Countess Environmental 2004). Calculations can be found in Appendix C.

To reduce wind erosion of recently disturbed areas, appropriate revegetation measures, application of water, or covering of spoil piles may occur. In addition, any open-bodied truck transporting dirt will be covered when the vehicle is in motion. The size of the Project site, distance to nearby structures and roadways, combined with vegetated buffers along the property boundaries and fencerows will aid in managing off-site dust impacts. Internal roads will be compacted gravel, which may result in an increase in airborne dust particles during dry conditioned and internal road traffic is heavy. During construction activities water may be applied to internal road system to reduce dust generation.

Once operational, the only source of dust emissions would be due to occasional maintenance vehicle traffic on the access roads. Typical existing sources of dust in the Project area include agricultural activities (e.g., from plowing, planting, and harvesting fields) and from travel along gravel and dirt roads.

5 IMPACTS TO RAIL

An existing railway is located on the western end of the Project that runs through Nepton, Kentucky. However, the Project will not use railways for any construction or operational activities. Therefore, the proposed solar facility will have no impacts on rail facilities as a result of Project construction or operation.

6 REFERENCES

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Environmental Protection Agency [EPA], 1974.

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APPENDIX A

Figures

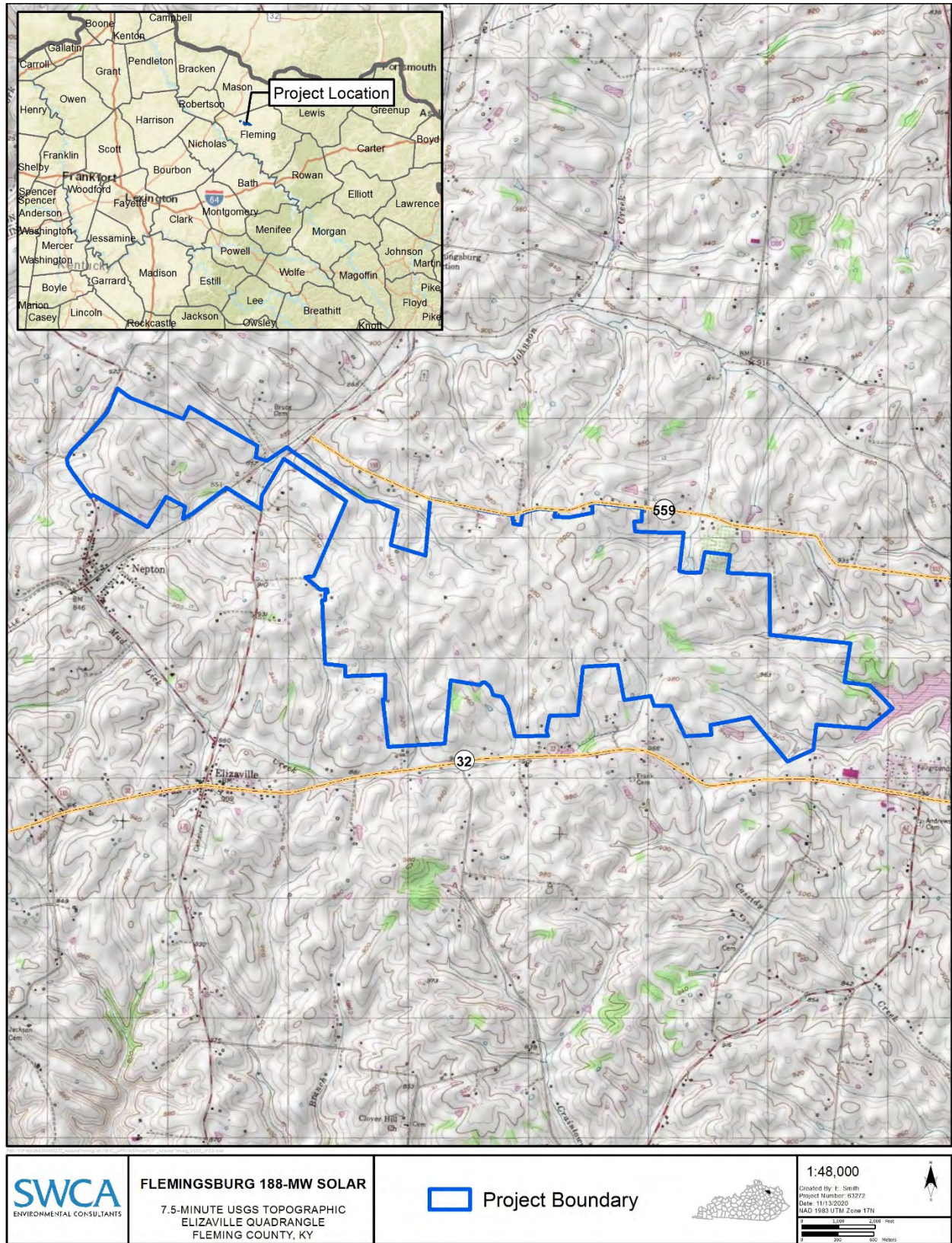


Figure A-1: Project Location Map

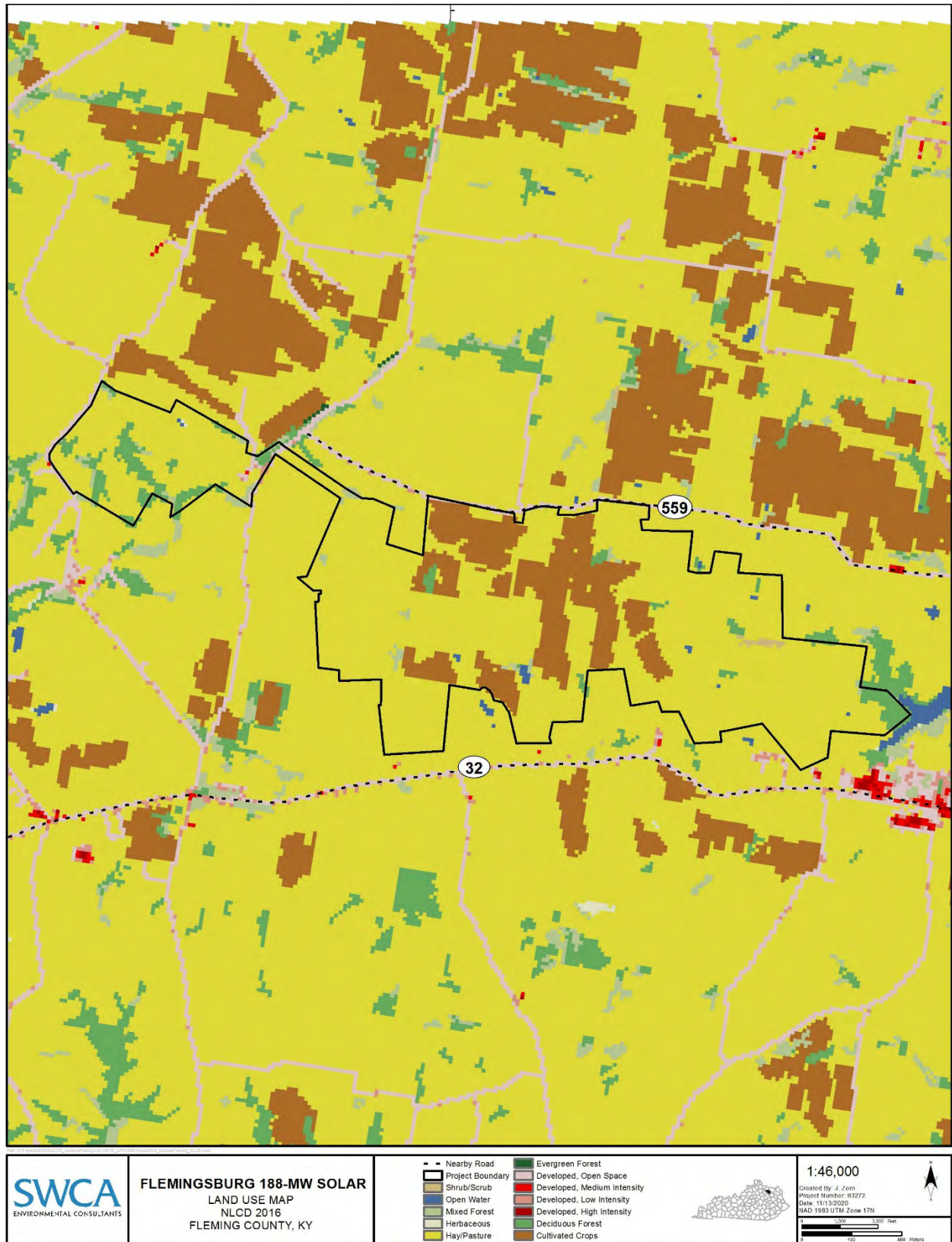


Figure A-2: Land Use Map



Figure A-3: Aerial Imagery Map

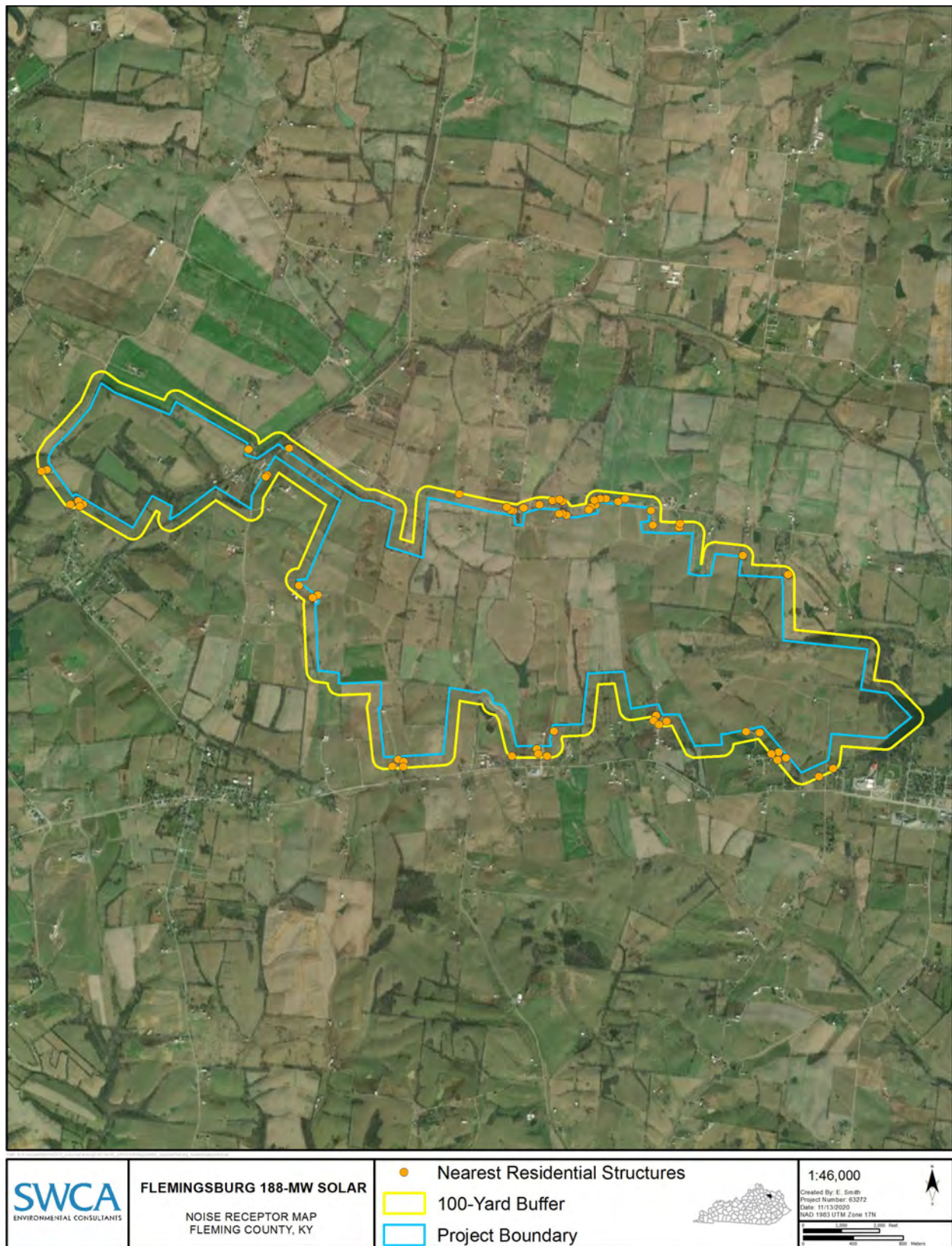


Figure A-4: Noise Receptor Map

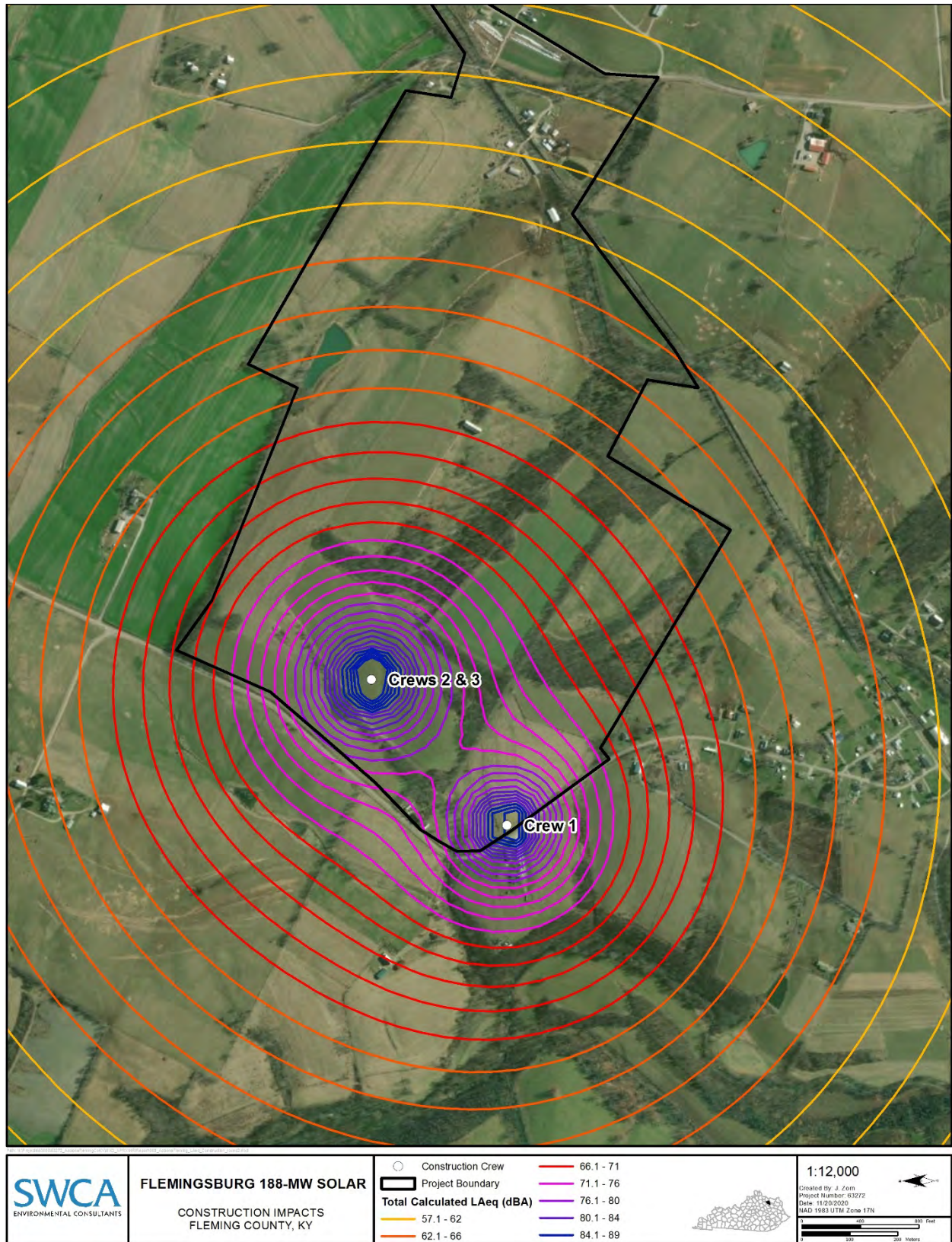


Figure A-5: Construction Noise Isopleth

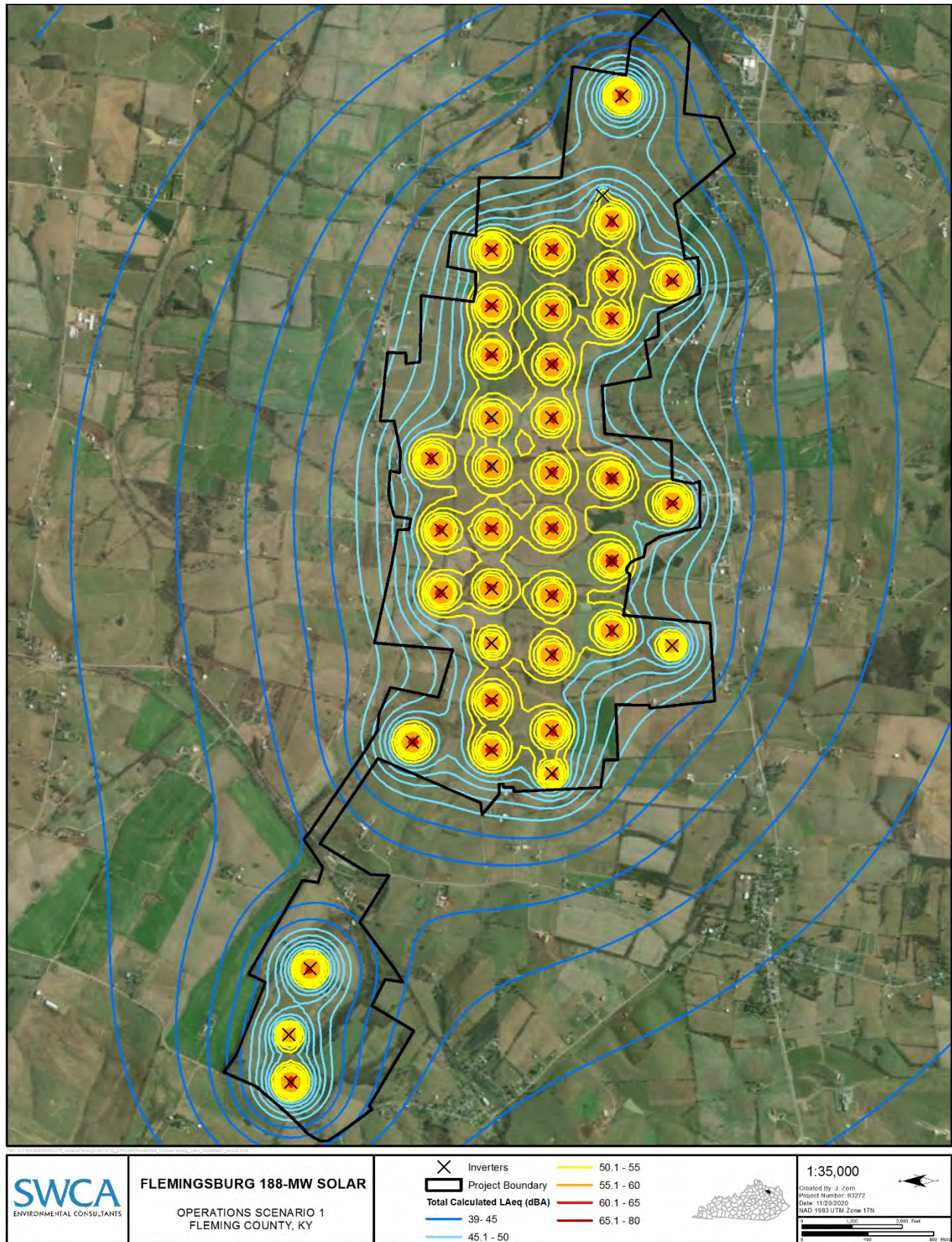


Figure A-6: Operational Noise (Scenario 1) Isoleth

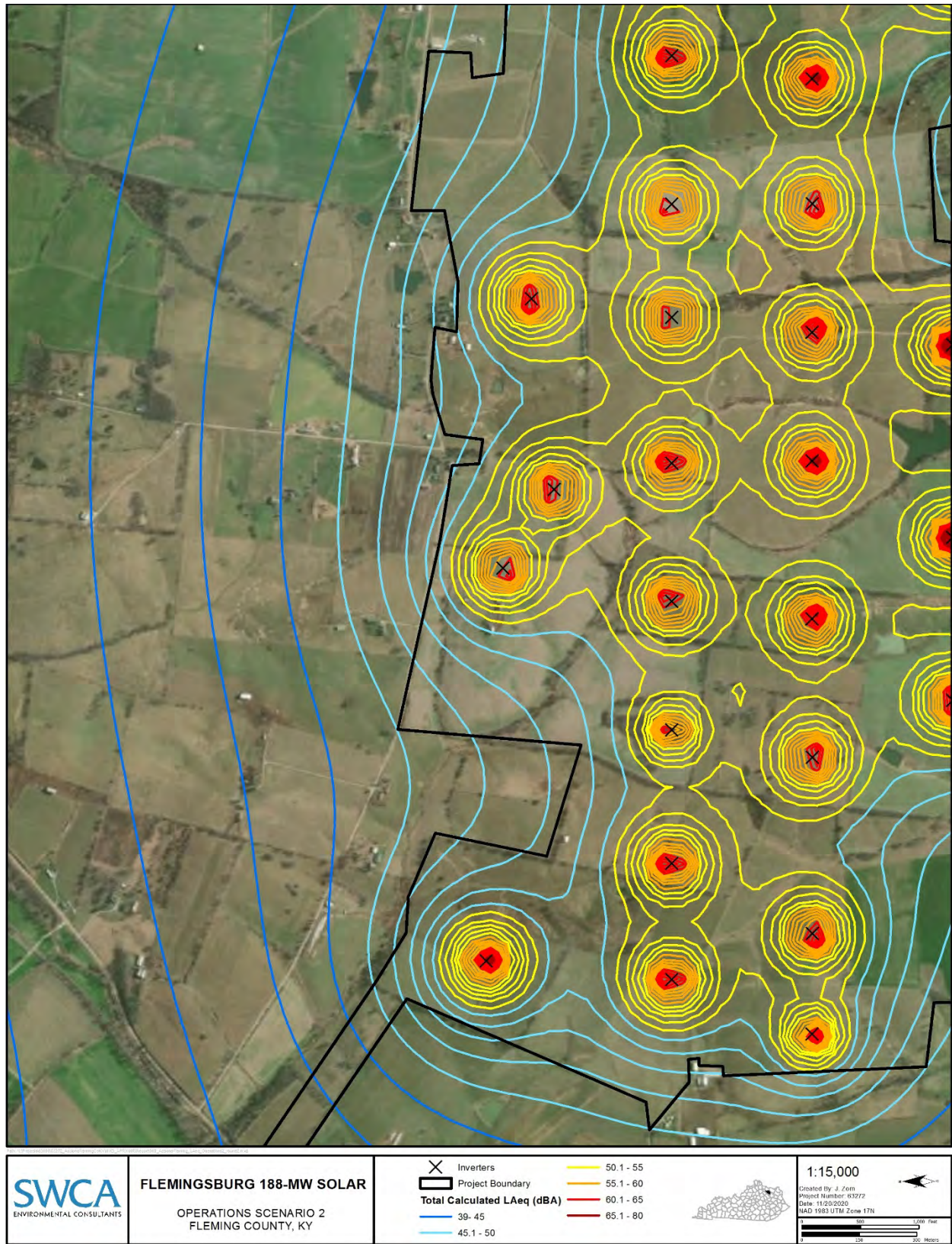


Figure A-7: Operational Noise (Scenario 2) Isoleth

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APPENDIX B

Noise Impact Calculations

Operational Noise
As Proposed Layout
Fleming County Solar Project
Summary

NSA ID	NSA UTM Coordinates		Background Noise Levels				Project Contributions				Total Calculated Noise Levels				Noise Increase			
	Eastings (m)	Northing (m)	Lday	Lnight	LAeq	Ldn	Lday	Lnight	LAeq	Ldn	Lday	Lnight	LAeq	Ldn	Lday	Lnight	LAeq	Ldn
NSA 1	258,320.0	4,256,294.0	40.0	34.0	38.6	42.0	41.2	41.2	41.2	47.6	43.7	41.9	43.1	48.6	3.7	7.9	4.5	6.7
NSA 2	257,740.4	4,256,663.4	40.0	34.0	38.6	42.0	46.2	46.2	46.2	52.6	47.2	46.5	46.9	53.0	7.2	12.5	8.4	11.0
NSA 3	257,852.6	4,256,666.6	40.0	34.0	38.6	42.0	45.4	45.4	45.4	51.8	46.5	45.7	46.2	52.2	6.5	11.7	7.6	10.3
NSA 4	257,942.0	4,256,496.8	40.0	34.0	38.6	42.0	43.7	43.6	43.6	50.0	45.2	44.1	44.8	50.7	5.2	10.1	6.3	8.7
NSA 5	257,998.7	4,256,506.0	40.0	34.0	38.6	42.0	43.5	43.4	43.4	49.8	45.1	43.9	44.7	50.5	5.1	9.9	6.1	8.5
NSA 6	258,052.4	4,256,463.5	40.0	34.0	38.6	42.0	43.0	42.9	43.0	49.4	44.7	43.5	44.3	50.1	4.7	9.5	5.7	8.1
NSA 7	258,418.7	4,256,329.0	40.0	34.0	38.6	42.0	41.1	41.1	41.1	47.5	43.6	41.9	43.0	48.6	3.6	7.9	4.5	6.6
NSA 8	258,523.1	4,256,381.9	40.0	34.0	38.6	42.0	41.1	41.0	41.1	47.5	43.6	41.8	43.0	48.5	3.6	7.8	4.4	6.6
NSA 9	258,073.3	4,256,253.8	40.0	34.0	38.6	42.0	41.8	41.7	41.7	48.1	44.0	42.4	43.4	49.1	4.0	8.4	4.9	7.1
NSA 10	258,604.0	4,256,307.0	40.0	34.0	38.6	42.0	40.4	40.4	40.4	46.8	43.2	41.3	42.6	48.0	3.2	7.3	4.0	6.1
NSA 11	258,893.5	4,256,485.6	40.0	34.0	38.6	42.0	40.2	40.1	40.1	46.5	43.1	41.1	42.4	47.8	3.1	7.1	3.9	5.9
NSA 12	259,050.4	4,256,575.1	40.0	34.0	38.6	42.0	39.7	39.7	39.7	46.1	42.9	40.7	42.2	47.5	2.9	6.7	3.6	5.6
NSA 13	258,077.6	4,257,935.1	40.0	34.0	38.6	42.0	44.1	44.0	44.1	50.4	45.5	44.4	45.1	51.0	5.5	10.4	6.6	9.1
NSA 14	257,991.9	4,258,103.2	40.0	34.0	38.6	42.0	43.9	43.9	43.9	50.3	45.4	44.3	45.0	50.9	5.4	10.3	6.4	8.9
NSA 15	257,540.9	4,258,326.8	40.0	34.0	38.6	42.0	44.6	44.6	44.6	51.0	45.9	45.0	45.6	51.5	5.9	11.0	7.0	9.6
NSA 16	257,187.4	4,258,394.0	40.0	34.0	38.6	42.0	44.9	44.9	44.9	51.3	46.1	45.2	45.8	51.8	6.1	11.2	7.3	9.8
NSA 17	256,720.0	4,258,506.0	40.0	34.0	38.6	42.0	45.2	45.2	45.2	51.6	46.3	45.5	46.0	52.0	6.3	11.5	7.5	10.1
NSA 18	256,528.5	4,258,520.7	40.0	34.0	38.6	42.0	45.8	45.7	45.8	52.2	46.8	46.0	46.5	52.6	6.8	12.0	8.0	10.6
NSA 19	256,270.6	4,258,413.8	40.0	34.0	38.6	42.0	48.1	48.0	48.1	54.4	48.7	48.2	48.5	54.7	8.7	14.2	9.9	12.7
NSA 20	256,088.0	4,258,478.4	40.0	34.0	38.6	42.0	46.9	46.8	46.8	53.2	47.7	47.0	47.4	53.6	7.7	13.0	8.9	11.6
NSA 21	255,872.9	4,258,433.2	40.0	34.0	38.6	42.0	47.4	47.4	47.4	53.8	48.2	47.6	48.0	54.1	8.2	13.6	9.4	12.1
NSA 22	255,458.4	4,258,574.2	40.0	34.0	38.6	42.0	45.4	45.4	45.4	51.8	46.5	45.7	46.2	52.2	6.5	11.7	7.7	10.3
NSA 23	255,035.6	4,258,581.6	40.0	34.0	38.6	42.0	44.7	44.7	44.7	51.1	46.0	45.0	45.6	51.6	6.0	11.0	7.1	9.6
NSA 24	253,971.2	4,258,584.4	40.0	34.0	38.6	42.0	42.1	42.1	42.1	48.5	44.2	42.7	43.7	49.3	4.2	8.7	5.1	7.4
NSA 25	253,711.2	4,258,114.3	40.0	34.0	38.6	42.0	41.7	41.6	41.7	48.1	43.9	42.3	43.4	49.0	3.9	8.3	4.8	7.1
NSA 26	254,181.5	4,257,833.1	40.0	34.0	38.6	42.0	45.5	45.5	45.5	51.9	46.6	45.8	46.3	52.3	6.6	11.8	7.7	10.4
NSA 27	253,893.7	4,257,554.2	40.0	34.0	38.6	42.0	42.8	42.8	42.8	49.2	44.6	43.3	44.2	49.9	4.6	9.3	5.6	8.0
NSA 28	253,741.9	4,257,347.6	40.0	34.0	38.6	42.0	41.5	41.5	41.5	47.9	43.8	42.2	43.3	48.9	3.8	8.2	4.7	6.9
NSA 29	254,887.9	4,256,678.1	40.0	34.0	38.6	42.0	45.1	45.0	45.1	51.4	46.3	45.4	45.9	51.9	6.3	11.4	7.4	10.0
NSA 30	255,455.6	4,256,373.5	40.0	34.0	38.6	42.0	44.2	44.1	44.2	50.6	45.6	44.5	45.2	51.1	5.6	10.5	6.7	9.2
NSA 31	255,818.0	4,256,438.0	40.0	34.0	38.6	42.0	45.4	45.4	45.4	51.8	46.5	45.7	46.2	52.2	6.5	11.7	7.6	10.2
NSA 32	255,962.6	4,256,460.2	40.0	34.0	38.6	42.0	46.3	46.2	46.3	52.7	47.2	46.5	46.9	53.0	7.2	12.5	8.4	11.1
NSA 33	256,713.5	4,256,688.0	40.0	34.0	38.6	42.0	45.7	45.7	45.7	52.1	46.8	46.0	46.5	52.5	6.8	12.0	7.9	10.6
NSA 34	256,976.5	4,256,525.2	40.0	34.0	38.6	42.0	45.2	45.1	45.2	51.6	46.3	45.5	46.0	52.0	6.3	11.5	7.5	10.1
NSA 35	253,764.8	4,258,874.6	40.0	34.0	38.6	42.0	41.6	41.6	41.6	48.0	43.9	42.3	43.4	49.0	3.9	8.3	4.8	7.0
NSA 36	252,898.8	4,259,541.2	40.0	34.0	38.6	42.0	41.1	41.1	41.1	47.5	43.6	41.9	43.0	48.6	3.6	7.9	4.5	6.6
NSA 37	252,168.1	4,258,767.5	40.0	34.0	38.6	42.0	40.8	40.7	40.8	47.2	43.4	41.6	42.8	48.3	3.4	7.6	4.3	6.4
NSA 38	252,427.8	4,258,477.8	40.0	34.0	38.6	42.0	40.3	40.2	40.3	46.7	43.2	41.2	42.5	47.9	3.2	7.2	3.9	6.0

Fleming County Solar Project
 Site Assessment Report

NSA ID	NSA UTM Coordinates		Type	Closest Noise Sources			
	Easting (m)	Northing (m)		Source ID	Distance (m)	Source ID	Distance (m)
NSA1	258320	4256294	church	A30	772.11	TRANS	947.21
NSA2	257740.35	4256663.38	Residence	A32	339.14	A33	434.09
NSA3	257852.56	4256666.58	Residence	A33	438.13	A32	449.24
NSA4	257941.99	4256496.77	Residence	A32	582.85	A33	624.40
NSA5	257998.7	4256506.01	Residence	A32	631.90	A33	633.86
NSA6	258052.38	4256463.53	Residence	A33	693.80	A32	697.46
NSA7	258418.67	4256329	Residence	A30	716.70	TRANS	962.45
NSA8	258523.07	4256381.9	Residence	A30	655.14	TRANS	977.87
NSA9	258073.34	4256253.83	Residence	A32	818.30	A33	896.19
NSA10	258604	4256307	High School	A30	733.74	TRANS	1,086.82
NSA11	258893.51	4256485.62	Residence	A30	660.42	TRANS	1,178.40
NSA12	259050.36	4256575.14	Residence	A30	695.77	TRANS	1,267.29
NSA13	258077.56	4257935.1	Residence	A15	496.79	A24	675.83
NSA14	257991.92	4258103.19	Residence	A15	484.59	A24	753.94
NSA15	257540.92	4258326.82	Residence	A15	500.17	A14	574.87
NSA16	257187.44	4258393.98	Residence	A14	568.68	A13	610.24
NSA17	256720	4258506	Residence	A6	504.31	A12	693.45
NSA18	256528.54	4258520.71	Residence	A6	385.14	A12	693.03
NSA19	256270.62	4258413.8	Residence	A6	224.98	A5	474.40
NSA20	256088	4258478.4	Residence	A6	368.16	A5	397.08
NSA21	255872.89	4258433.18	Residence	A5	296.57	A4	470.28
NSA22	255458.38	4258574.21	Residence	A4	440.03	A5	611.25
NSA23	255035.62	4258581.61	Residence	A3	514.23	A4	648.48
NSA24	253971.23	4258584.41	Residence	A3	682.44	A2	830.54
NSA25	253711.15	4258114.31	Residence	A7	884.60	A3	908.07
NSA26	254181.51	4257833.11	Residence	A7	367.02	B2	433.14
NSA27	253893.73	4257554.15	Residence	B2	520.47	A7	710.17
NSA28	253741.91	4257347.55	Residence	B2	674.12	A16	933.72
NSA29	254887.9	4256678.13	Residence	B3	300.61	A25	570.29
NSA30	255455.6	4256373.47	Residence	B3	448.56	A31	694.37
NSA31	255818	4256438	Residence	A31	373.75	A26	668.58
NSA32	255962.55	4256460.15	Residence	A31	283.92	A27	680.20
NSA33	256713.47	4256688.04	Residence	A28	616.45	A27	653.60
NSA34	256976.45	4256525.24	Residence	A32	477.47	A28	604.86
NSA35	253764.83	4258874.59	Residence	A2	550.11	B1	966.93
NSA36	252898.83	4259541.19	Residence	B1	485.24	A1	613.88
NSA37	252168.07	4258767.46	Residence	A1	458.99	B1	712.54
NSA38	252427.79	4258477.81	Residence	A1	582.50	B1	702.49

Block	Inverter ID	Inverter UTM Coordinates	
		Easting (m)	Northing (m)
A-1	A-1	252,528.60	4,259,051.52
A-2	A-2	253,217.96	4,258,934.25
A-3	A-3	254,597.27	4,258,312.75
A-4	A-4	255,507.64	4,258,136.95
A-5	A-5	255,885.43	4,258,136.88
A-6	A-6	256,323.00	4,258,195.00
A-7	A-7	254,548.51	4,257,829.10
A-8	A-8	254,850.77	4,257,828.84
A-9	A-9	255,533.88	4,257,829.15
A-10	A-10	255,894.42	4,257,829.12
A-11	A-11	256,274.81	4,257,829.08
A-12	A-12	256,570.18	4,257,828.93
A-13	A-13	256,956.19	4,257,829.25
A-14	A-14	257,253.23	4,257,829.12
A-15	A-15	257,592.17	4,257,829.28
A-16	A-16	254,668.53	4,257,462.46
A-17	A-17	255,127.70	4,257,462.49
A-18	A-18	255,488.14	4,257,462.93
A-19	A-19	255,900.50	4,257,462.81
A-20	A-20	256,235.57	4,257,462.63
A-21	A-21	256,570.70	4,257,462.51
A-22	A-22	256,896.41	4,257,462.62
A-23	A-23	257,225.35	4,257,462.65
A-24	A-24	257,594.36	4,257,462.59
A-25	A-25	255,275.85	4,257,096.13
A-26	A-26	255,700.77	4,257,096.22
A-27	A-27	256,203.13	4,257,096.38
A-28	A-28	257,175.15	4,257,096.53
A-29	A-29	257,433.06	4,257,096.66
A-30	A-30	258,530.00	4,257,037.00
A-31	A-31	256,051.61	4,256,729.74
A-32	A-32	257,407.81	4,256,729.94
A-33	A-33	257,768.43	4,257,096.56
B-1	B-1	252,816.43	4,259,063.00
B-2	B-2	254,406.11	4,257,462.75
B-3	B-3	255,183.93	4,256,730.40
C-1	C-1	255,199.02	4,257,829.17
Transformer	Trans	257,923.00	4,257,154.00

Fleming County Solar Project Site Assessment Report

Operational Noise As Proposed Layout Fleming County Solar Project NSA 19

ID	to Zone	to Station	to Receiver
NSA 19	25	5500002	4358413.8

ID	Distance (ft)	Reference Sound Level (dBA)	Source Sound Distance (m)	Source Height (ft)	Receiver Height (m)	Geometrical Spreading (dB-A)	Sound Level @ NSA 19 (dBA)
A1	3.7965	95.0	10.0	5.5	5.5	49.5	29.7
A2	3.0067	95.0	10.0	5.5	5.5	49.5	29.9
A3	1.8164	95.0	10.0	5.5	5.5	49.5	29.8
A4	4.112	95.0	10.0	5.5	5.5	50.9	30.1
A5	4.924	95.0	10.0	5.5	5.5	51.2	30.2
A6	2.81	95.0	10.0	5.5	5.5	50.9	30.1
A7	1.8187	95.0	10.0	5.5	5.5	49.0	29.1
A8	1.8295	95.0	10.0	5.5	5.5	49.4	29.6
A9	4.825	95.0	10.0	5.5	5.5	52.2	31.8
A10	4.623	95.0	10.0	5.5	5.5	52.5	32.5
A11	3.827	95.0	10.0	5.5	5.5	50.0	30.0
A12	1.921	95.0	10.0	5.5	5.5	48.9	29.0
A13	4.828	95.0	10.0	5.5	5.5	52.5	32.5
A14	1.824	95.0	10.0	5.5	5.5	48.9	29.1
A15	1.8455	95.0	10.0	5.5	5.5	48.9	29.1
A16	1.8935	95.0	10.0	5.5	5.5	49.1	29.0
A17	1.8595	95.0	10.0	5.5	5.5	49.1	29.0
A18	1.2314	95.0	10.0	5.5	5.5	50.3	29.6
A19	1.0005	95.0	10.0	5.5	5.5	50.9	31.1
A20	3.813	95.0	10.0	5.5	5.5	50.3	31.7
A21	3.953	95.0	10.0	5.5	5.5	50.7	31.9
A22	1.1919	95.0	10.0	5.5	5.5	50.4	30.0
A23	1.8477	95.0	10.0	5.5	5.5	49.3	29.7
A24	1.6304	95.0	10.0	5.5	5.5	49.9	29.4
A25	1.6315	95.0	10.0	5.5	5.5	49.1	29.0
A26	1.4955	95.0	10.0	5.5	5.5	49.8	29.8
A27	1.4955	95.0	10.0	5.5	5.5	49.1	29.0
A28	1.5973	95.0	10.0	5.5	5.5	49.2	29.2
A29	1.2967	95.0	10.0	5.5	5.5	49.6	29.6
A30	2.2421	95.0	10.0	5.5	5.5	49.5	29.0
A31	1.8982	95.0	10.0	5.5	5.5	49.5	29.1
A32	3.9181	95.0	10.0	5.5	5.5	49.8	29.0
A33	3.9181	95.0	10.0	5.5	5.5	49.8	29.0
A34	1.6841	95.0	10.0	5.5	5.5	49.7	29.0
A35	1.2512	95.0	10.0	5.5	5.5	49.8	29.7
A36	2.0911	95.0	10.0	5.5	5.5	49.1	29.0
A37	2.0911	95.0	10.0	5.5	5.5	49.7	29.0
A38	1.2307	95.0	10.0	5.5	5.5	49.6	29.0
A39	2.0911	95.0	10.0	5.5	5.5	49.1	29.0
Total							27.8

A1	A1	293.2896	2.1928152
A2	A2	293.2726	2.2035124
A3	A3	294.4474	2.3084176
A4	A4	295.2024	2.3811599
A5	A5	295.8841	2.4358188
A6	A6	295.3205	2.3581900
A7	A7	294.9850	2.3229110
A8	A8	294.6617	2.2979104
A9	A9	295.4148	2.4182155
A10	A10	295.9442	2.4782112
A11	A11	295.5161	2.4325129
A12	A12	295.4019	2.4274990
A13	A13	295.9619	2.4929124
A14	A14	295.2533	2.3782112
A15	A15	295.2517	2.3782238
A16	A16	295.8853	2.4116108
A17	A17	295.1776	2.3674648
A18	A18	296.2881	2.5074213
A19	A19	296.8025	2.5782010
A20	A20	296.2859	2.4871613
A21	A21	296.4925	2.5248921
A22	A22	296.8641	2.6042112
A23	A23	295.2253	2.3774025
A24	A24	295.2638	2.3782335
A25	A25	294.2198	2.3479611
A26	A26	294.7017	2.3629610
A27	A27	295.3013	2.4175668
A28	A28	295.1513	2.3729622
A29	A29	295.8598	2.4729666
A30	A30	296.0000	2.5000000
A31	A31	296.0100	2.5000000
A32	A32	297.4899	2.6242944
A33	A33	297.4899	2.6242944
A34	A34	296.1100	2.4500000
A35	A35	294.8918	2.3679000
A36	A36	294.8918	2.3679000
A37	A37	295.1890	2.4182112
A38	A38	295.1890	2.4182112
A39	A39	295.2926	2.4215108

Receiver ID	Layer	Distance (ft)	Layer	Layer
NSA 19	0.0	4.0	34.0	42.0
Forest	38.1	48.0	44.1	54.4
Top of building	38.0	48.1	48.5	53.7
Noise Receiver	8.7	14.1	9.6	12.7

Receiver	Day	Night	1st	2nd
NSA 19	3	3	42.0	39.6

Receiver ID	Layer	Distance (ft)	Layer	Layer	Day	Night	1st	2nd	Day	Night	1st	2nd
NSA 19	0.0	25.113	42.0	35.113	48.2	55.014	58.1	60.917	48.0	53.112	58.0	63.114
NSA 19	3.0	26.113	46.0	36.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	6.0	27.113	50.0	37.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	9.0	28.113	54.0	38.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	12.0	29.113	58.0	39.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	15.0	30.113	62.0	40.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	18.0	31.113	66.0	41.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	21.0	32.113	70.0	42.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	24.0	33.113	74.0	43.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	27.0	34.113	78.0	44.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	30.0	35.113	82.0	45.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	33.0	36.113	86.0	46.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	36.0	37.113	90.0	47.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	39.0	38.113	94.0	48.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	42.0	39.113	98.0	49.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	45.0	40.113	102.0	50.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	48.0	41.113	106.0	51.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	51.0	42.113	110.0	52.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	54.0	43.113	114.0	53.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	57.0	44.113	118.0	54.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	60.0	45.113	122.0	55.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	63.0	46.113	126.0	56.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	66.0	47.113	130.0	57.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	69.0	48.113	134.0	58.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	72.0	49.113	138.0	59.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	75.0	50.113	142.0	60.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	78.0	51.113	146.0	61.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	81.0	52.113	150.0	62.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	84.0	53.113	154.0	63.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	87.0	54.113	158.0	64.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	90.0	55.113	162.0	65.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	93.0	56.113	166.0	66.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	96.0	57.113	170.0	67.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	99.0	58.113	174.0	68.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	102.0	59.113	178.0	69.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	105.0	60.113	182.0	70.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	108.0	61.113	186.0	71.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	111.0	62.113	190.0	72.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	114.0	63.113	194.0	73.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	117.0	64.113	198.0	74.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	120.0	65.113	202.0	75.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	123.0	66.113	206.0	76.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	126.0	67.113	210.0	77.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	129.0	68.113	214.0	78.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	132.0	69.113	218.0	79.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	135.0	70.113	222.0	80.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	138.0	71.113	226.0	81.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	141.0	72.113	230.0	82.113	48.2	56.014	59.1	60.917	48.0	53.112	58.0	63.114
NSA 19	144.0	73.113	234.0	83.113	48.							

Fleming County Solar Project Site Assessment Report

Operational Noise As Proposed Layout Fleming County Solar Project Property Boundary

EA Date:	EA Title:	EA Number:
06/20/2017	EA Title	EA Number

ID	Distance (ft)	Reference Level (dBA)	Source Sound Pressure Level (dBA)	Source Height (ft)	Receiver Height (ft)	Distance (ft)	Attenuation (dB)	Sound Level @ Property Boundary (dBA)
A.1	4,225.0	55.0	30.0	1.0	1.0	4,225.0	0.0	30.0
A.2	3,525.0	55.0	30.0	1.0	1.0	3,525.0	0.0	30.0
A.3	2,825.0	55.0	30.0	1.0	1.0	2,825.0	0.0	30.0
A.4	2,125.0	55.0	30.0	1.0	1.0	2,125.0	0.0	30.0
A.5	1,425.0	55.0	30.0	1.0	1.0	1,425.0	0.0	30.0
A.6	725.0	55.0	30.0	1.0	1.0	725.0	0.0	30.0
A.7	25.0	55.0	30.0	1.0	1.0	25.0	0.0	30.0
A.8	1,425.0	55.0	30.0	1.0	1.0	1,425.0	0.0	30.0
A.9	2,125.0	55.0	30.0	1.0	1.0	2,125.0	0.0	30.0
A.10	2,825.0	55.0	30.0	1.0	1.0	2,825.0	0.0	30.0
A.11	3,525.0	55.0	30.0	1.0	1.0	3,525.0	0.0	30.0
A.12	4,225.0	55.0	30.0	1.0	1.0	4,225.0	0.0	30.0
A.13	4,925.0	55.0	30.0	1.0	1.0	4,925.0	0.0	30.0
A.14	5,625.0	55.0	30.0	1.0	1.0	5,625.0	0.0	30.0
A.15	6,325.0	55.0	30.0	1.0	1.0	6,325.0	0.0	30.0
A.16	7,025.0	55.0	30.0	1.0	1.0	7,025.0	0.0	30.0
A.17	7,725.0	55.0	30.0	1.0	1.0	7,725.0	0.0	30.0
A.18	8,425.0	55.0	30.0	1.0	1.0	8,425.0	0.0	30.0
A.19	9,125.0	55.0	30.0	1.0	1.0	9,125.0	0.0	30.0
A.20	9,825.0	55.0	30.0	1.0	1.0	9,825.0	0.0	30.0
A.21	10,525.0	55.0	30.0	1.0	1.0	10,525.0	0.0	30.0
A.22	11,225.0	55.0	30.0	1.0	1.0	11,225.0	0.0	30.0
A.23	11,925.0	55.0	30.0	1.0	1.0	11,925.0	0.0	30.0
A.24	12,625.0	55.0	30.0	1.0	1.0	12,625.0	0.0	30.0
A.25	13,325.0	55.0	30.0	1.0	1.0	13,325.0	0.0	30.0
A.26	14,025.0	55.0	30.0	1.0	1.0	14,025.0	0.0	30.0
A.27	14,725.0	55.0	30.0	1.0	1.0	14,725.0	0.0	30.0
A.28	15,425.0	55.0	30.0	1.0	1.0	15,425.0	0.0	30.0
A.29	16,125.0	55.0	30.0	1.0	1.0	16,125.0	0.0	30.0
A.30	16,825.0	55.0	30.0	1.0	1.0	16,825.0	0.0	30.0
A.31	17,525.0	55.0	30.0	1.0	1.0	17,525.0	0.0	30.0
A.32	18,225.0	55.0	30.0	1.0	1.0	18,225.0	0.0	30.0
A.33	18,925.0	55.0	30.0	1.0	1.0	18,925.0	0.0	30.0
A.34	19,625.0	55.0	30.0	1.0	1.0	19,625.0	0.0	30.0
A.35	20,325.0	55.0	30.0	1.0	1.0	20,325.0	0.0	30.0
A.36	21,025.0	55.0	30.0	1.0	1.0	21,025.0	0.0	30.0
A.37	21,725.0	55.0	30.0	1.0	1.0	21,725.0	0.0	30.0
A.38	22,425.0	55.0	30.0	1.0	1.0	22,425.0	0.0	30.0
A.39	23,125.0	55.0	30.0	1.0	1.0	23,125.0	0.0	30.0
A.40	23,825.0	55.0	30.0	1.0	1.0	23,825.0	0.0	30.0
A.41	24,525.0	55.0	30.0	1.0	1.0	24,525.0	0.0	30.0
A.42	25,225.0	55.0	30.0	1.0	1.0	25,225.0	0.0	30.0
A.43	25,925.0	55.0	30.0	1.0	1.0	25,925.0	0.0	30.0
A.44	26,625.0	55.0	30.0	1.0	1.0	26,625.0	0.0	30.0
A.45	27,325.0	55.0	30.0	1.0	1.0	27,325.0	0.0	30.0
A.46	28,025.0	55.0	30.0	1.0	1.0	28,025.0	0.0	30.0
A.47	28,725.0	55.0	30.0	1.0	1.0	28,725.0	0.0	30.0
A.48	29,425.0	55.0	30.0	1.0	1.0	29,425.0	0.0	30.0
A.49	30,125.0	55.0	30.0	1.0	1.0	30,125.0	0.0	30.0
A.50	30,825.0	55.0	30.0	1.0	1.0	30,825.0	0.0	30.0
A.51	31,525.0	55.0	30.0	1.0	1.0	31,525.0	0.0	30.0
A.52	32,225.0	55.0	30.0	1.0	1.0	32,225.0	0.0	30.0
A.53	32,925.0	55.0	30.0	1.0	1.0	32,925.0	0.0	30.0
A.54	33,625.0	55.0	30.0	1.0	1.0	33,625.0	0.0	30.0
A.55	34,325.0	55.0	30.0	1.0	1.0	34,325.0	0.0	30.0
A.56	35,025.0	55.0	30.0	1.0	1.0	35,025.0	0.0	30.0
A.57	35,725.0	55.0	30.0	1.0	1.0	35,725.0	0.0	30.0
A.58	36,425.0	55.0	30.0	1.0	1.0	36,425.0	0.0	30.0
A.59	37,125.0	55.0	30.0	1.0	1.0	37,125.0	0.0	30.0
A.60	37,825.0	55.0	30.0	1.0	1.0	37,825.0	0.0	30.0
A.61	38,525.0	55.0	30.0	1.0	1.0	38,525.0	0.0	30.0
A.62	39,225.0	55.0	30.0	1.0	1.0	39,225.0	0.0	30.0
A.63	39,925.0	55.0	30.0	1.0	1.0	39,925.0	0.0	30.0
A.64	40,625.0	55.0	30.0	1.0	1.0	40,625.0	0.0	30.0
A.65	41,325.0	55.0	30.0	1.0	1.0	41,325.0	0.0	30.0
A.66	42,025.0	55.0	30.0	1.0	1.0	42,025.0	0.0	30.0
A.67	42,725.0	55.0	30.0	1.0	1.0	42,725.0	0.0	30.0
A.68	43,425.0	55.0	30.0	1.0	1.0	43,425.0	0.0	30.0
A.69	44,125.0	55.0	30.0	1.0	1.0	44,125.0	0.0	30.0
A.70	44,825.0	55.0	30.0	1.0	1.0	44,825.0	0.0	30.0
A.71	45,525.0	55.0	30.0	1.0	1.0	45,525.0	0.0	30.0
A.72	46,225.0	55.0	30.0	1.0	1.0	46,225.0	0.0	30.0
A.73	46,925.0	55.0	30.0	1.0	1.0	46,925.0	0.0	30.0
A.74	47,625.0	55.0	30.0	1.0	1.0	47,625.0	0.0	30.0
A.75	48,325.0	55.0	30.0	1.0	1.0	48,325.0	0.0	30.0
A.76	49,025.0	55.0	30.0	1.0	1.0	49,025.0	0.0	30.0
A.77	49,725.0	55.0	30.0	1.0	1.0	49,725.0	0.0	30.0
A.78	50,425.0	55.0	30.0	1.0	1.0	50,425.0	0.0	30.0
A.79	51,125.0	55.0	30.0	1.0	1.0	51,125.0	0.0	30.0
A.80	51,825.0	55.0	30.0	1.0	1.0	51,825.0	0.0	30.0
A.81	52,525.0	55.0	30.0	1.0	1.0	52,525.0	0.0	30.0
A.82	53,225.0	55.0	30.0	1.0	1.0	53,225.0	0.0	30.0
A.83	53,925.0	55.0	30.0	1.0	1.0	53,925.0	0.0	30.0
A.84	54,625.0	55.0	30.0	1.0	1.0	54,625.0	0.0	30.0
A.85	55,325.0	55.0	30.0	1.0	1.0	55,325.0	0.0	30.0
A.86	56,025.0	55.0	30.0	1.0	1.0	56,025.0	0.0	30.0
A.87	56,725.0	55.0	30.0	1.0	1.0	56,725.0	0.0	30.0
A.88	57,425.0	55.0	30.0	1.0	1.0	57,425.0	0.0	30.0
A.89	58,125.0	55.0	30.0	1.0	1.0	58,125.0	0.0	30.0
A.90	58,825.0	55.0	30.0	1.0	1.0	58,825.0	0.0	30.0
A.91	59,525.0	55.0	30.0	1.0	1.0	59,525.0	0.0	30.0
A.92	60,225.0	55.0	30.0	1.0	1.0	60,225.0	0.0	30.0
A.93	60,925.0	55.0	30.0	1.0	1.0	60,925.0	0.0	30.0
A.94	61,625.0	55.0	30.0	1.0	1.0	61,625.0	0.0	30.0
A.95	62,325.0	55.0	30.0	1.0	1.0	62,325.0	0.0	30.0
A.96	63,025.0	55.0	30.0	1.0	1.0	63,025.0	0.0	30.0
A.97	63,725.0	55.0	30.0	1.0	1.0	63,725.0	0.0	30.0
A.98	64,425.0	55.0	30.0	1.0	1.0	64,425.0	0.0	30.0
A.99	65,125.0	55.0	30.0	1.0	1.0	65,125.0	0.0	30.0
A.100	65,825.0	55.0	30.0	1.0	1.0	65,825.0	0.0	30.0

ID	Distance (ft)	Reference Level (dBA)	Source Sound Pressure Level (dBA)	Source Height (ft)	Receiver Height (ft)	Distance (ft)	Attenuation (dB)	Sound Level @ Property Boundary (dBA)
A.1	4,225.0	55.0	30.0	1.0	1.0	4,225.0	0.0	30.0
A.2	3,525.0	55.0	30.0	1.0	1.0	3,525.0	0.0	30.0
A.3	2,825.0	55.0	30.0	1.0	1.0	2,825.0	0.0	30.0
A.4	2,125.0	55.0	30.0	1.0	1.0	2,125.0	0.0	30.0
A.5	1,425.0	55.0	30.0	1.0	1.0	1,425.0	0.0	30.0
A.6	725.0	55.0	30.0	1.0	1.0	725.0	0.0	30.0
A.7	25.0	55.0	30.0	1.0	1.0	25.0	0.0	30.0
A.8	1,425.0	55.0	30.0	1.0	1.0	1,425.0	0.0	30.0
A.9	2,125.0	55.0	30.0	1.0	1.0	2,125.0	0.0	30.0
A.10	2,825.0	55.0	30.0	1.0	1.0	2,825.0	0.0	30.0
A.11	3,525.0	55.0	30.0	1.0	1.0	3,525.0	0.0	30.0
A.12	4,225.0	55.0	30.0	1.0	1.0	4,225.0	0.0	30.0
A.13	4,925.0	55.0	30.0	1.0	1.0	4,925.0	0.0	30.0
A.14	5,625.0	55.0	30.0	1.0	1.0	5,625.0	0.0	30.0
A.15	6,325.0	55.0	30.0	1.0	1.0	6,325.0	0.0	30.0
A.16	7,025.0	55.0	30.0	1.0	1.0	7,025.0	0.0	30.0
A.17	7,725.0	55.0	30.0	1.0	1.0	7,725.0	0.0	30.0
A.18	8,425.0	55.0	30.0	1.0	1.0	8,425.0	0.0	30.0
A.19	9,125.0	55.0	30.0	1.0	1.0	9,125.0	0.0	30.0
A.20	9,825.0	55.0	30.0	1.0	1.0	9,825.0	0.0	30.0
A.21	10,525.0	55.0	30.0	1.0	1.0	10,525.0	0.0	30.0
A.22	11,225.0	55.0	30.0	1.0	1.0	11,225.0	0.0	30.0
A.23	11,925.0	55.0	30.0	1.0	1.0	11,925.0	0.0	30.0
A.24	12,625.0	55.0	30.0	1.0	1.0	12,625.0	0.0	30.0
A.25	13,325.0	55.0	30.0	1.0	1.0	13,325.0	0.0	30.0
A.26	14,025.0	55.0	30.0	1.0	1.0	14,025.0	0.0	30.0
A.27	14,725.0	55.0	30.0	1.0	1.0	14,725.0	0.0	30.0
A.28	15,425.0	55.0	30.0	1.0	1.0	15,425.0	0.0	30.0
A.29	16,125.0	55.0	30.0	1.0	1.0	16,125.0	0.0	30.0
A.30	16,825.0	55.0	30.0	1.0	1.0	16,825.0	0.0	30.0
A.31	17,525.0	55.0	30.0	1.0	1.0	17,525.0	0.0	30.0
A.32	18,225.0	55.0	30.0	1.0	1.0	18,225.0	0.0	30.0
A.33	18,925.0	55.0	30.0	1.0	1.0	18,925.0	0.0	30.0

Fleming County Solar Project
Site Assessment Report

Operational Noise
Fleming County Solar Project
Worst Case Conditions
Summary

NSA ID	NSA UTM Coordinates		Background Noise Levels				Project Contributions				Total Calculated Noise Levels				Noise Increase			
	Easting (m)	Northing (m)	Lday	Night	L _{Aeq}	L _{dn}	Lday	Night	L _{Aeq}	L _{dn}	Lday	Night	L _{Aeq}	L _{dn}	Lday	Night	L _{Aeq}	L _{dn}
NSA 1	258,320.0	4,256,294.0	40.0	34.0	38.6	42.0	42.3	42.3	42.3	48.7	44.3	42.9	43.8	49.5	4.3	8.9	5.3	7.6
NSA 2	257,740.4	4,256,663.4	40.0	34.0	38.6	42.0	47.3	47.2	47.3	53.6	48.0	47.4	47.8	53.9	8.0	13.4	9.2	12.0
NSA 3	257,852.6	4,256,666.6	40.0	34.0	38.6	42.0	47.1	47.0	47.1	53.5	47.9	47.3	47.6	53.8	7.9	13.3	9.1	11.8
NSA 4	257,942.0	4,256,456.8	40.0	34.0	38.6	42.0	45.2	45.1	45.2	51.6	46.3	45.5	46.0	52.0	6.3	11.5	7.5	10.1
NSA 5	257,998.7	4,256,506.0	40.0	34.0	38.6	42.0	45.1	45.0	45.0	51.4	46.2	45.4	45.9	51.9	6.2	11.4	7.4	9.9
NSA 6	258,052.4	4,256,463.5	40.0	34.0	38.6	42.0	44.4	44.3	44.3	50.7	45.7	44.7	45.4	51.3	5.7	10.7	6.8	9.3
NSA 7	258,418.7	4,256,329.0	40.0	34.0	38.6	42.0	41.1	41.1	41.1	47.5	43.6	41.9	43.0	48.6	3.6	7.9	4.5	6.6
NSA 8	258,523.1	4,256,381.9	40.0	34.0	38.6	42.0	41.1	41.0	41.1	47.5	43.6	41.8	43.0	48.5	3.6	7.8	4.4	6.6
NSA 9	258,073.3	4,256,253.8	40.0	34.0	38.6	42.0	41.8	41.7	41.7	48.1	44.0	42.4	43.4	49.1	4.0	8.4	4.9	7.1
NSA 10	258,604.0	4,256,307.0	40.0	34.0	38.6	42.0	40.4	40.4	40.4	46.8	43.2	41.3	42.8	48.0	3.2	7.3	4.0	6.1
NSA 11	258,293.6	4,256,485.6	40.0	34.0	38.6	42.0	40.2	40.1	40.1	46.5	43.1	41.3	42.4	47.8	3.1	7.1	3.9	5.9
NSA 12	258,050.4	4,256,575.1	40.0	34.0	38.6	42.0	39.7	39.7	39.7	46.1	42.9	40.7	42.2	47.5	2.9	6.7	3.6	5.6
NSA 13	258,077.6	4,257,935.1	40.0	34.0	38.6	42.0	46.1	46.1	46.1	52.5	47.1	46.3	46.8	53.9	7.1	12.3	8.2	10.9
NSA 14	257,991.9	4,258,103.2	40.0	34.0	38.6	42.0	45.3	45.3	45.3	51.7	46.4	45.6	46.1	52.1	6.4	11.6	7.6	10.2
NSA 15	257,540.9	4,258,326.8	40.0	34.0	38.6	42.0	46.3	46.2	46.2	52.6	47.2	46.5	46.9	53.0	7.2	12.5	8.4	11.0
NSA 16	257,187.4	4,258,394.0	40.0	34.0	38.6	42.0	46.7	46.7	46.7	53.1	47.6	46.9	47.3	53.4	7.6	12.9	8.8	11.5
NSA 17	256,720.0	4,258,500.0	40.0	34.0	38.6	42.0	46.7	46.7	46.7	53.1	47.6	46.9	47.3	53.4	7.6	12.9	8.8	11.5
NSA 18	256,528.5	4,258,520.7	40.0	34.0	38.6	42.0	46.7	46.7	46.7	53.1	47.6	46.9	47.3	53.4	7.6	12.9	8.8	11.5
NSA 19	256,270.6	4,258,413.8	40.0	34.0	38.6	42.0	48.0	47.9	47.9	54.3	48.6	48.1	48.4	54.6	8.6	14.1	9.8	12.6
NSA 20	256,088.0	4,258,478.4	40.0	34.0	38.6	42.0	47.8	47.8	47.8	54.2	48.5	47.9	48.3	54.4	8.5	13.9	9.7	12.5
NSA 21	255,872.9	4,258,433.2	40.0	34.0	38.6	42.0	48.1	48.0	48.1	54.5	48.7	48.2	48.5	54.7	8.7	14.2	10.0	12.7
NSA 22	255,458.4	4,258,574.2	40.0	34.0	38.6	42.0	47.4	47.3	47.3	53.7	48.1	47.5	47.9	54.0	8.1	13.5	9.3	12.1
NSA 23	255,035.6	4,258,581.6	40.0	34.0	38.6	42.0	47.0	46.9	46.9	53.3	47.8	47.1	47.5	53.6	7.8	13.1	9.0	11.7
NSA 24	253,971.2	4,258,584.4	40.0	34.0	38.6	42.0	43.2	43.1	43.1	49.5	44.9	43.6	44.4	50.2	4.9	9.6	5.9	8.3
NSA 25	253,711.2	4,258,114.3	40.0	34.0	38.6	42.0	42.4	42.3	42.4	48.7	44.4	43.8	43.9	49.6	4.4	8.9	5.3	7.6
NSA 26	254,181.5	4,257,833.1	40.0	34.0	38.6	42.0	46.8	46.7	46.7	53.1	47.6	47.0	47.4	53.5	7.6	13.0	8.8	11.5
NSA 27	253,893.7	4,257,694.2	40.0	34.0	38.6	42.0	43.8	43.8	43.8	50.2	45.3	44.2	44.9	50.8	5.3	10.2	6.4	8.9
NSA 28	253,741.9	4,257,347.6	40.0	34.0	38.6	42.0	42.7	42.2	42.2	48.6	44.2	42.8	43.7	49.4	4.2	8.8	5.2	7.5
NSA 29	254,287.9	4,256,678.1	40.0	34.0	38.6	42.0	46.4	46.3	46.3	52.7	47.3	46.6	47.0	53.1	7.3	12.8	8.4	11.1
NSA 30	255,455.6	4,256,375.5	40.0	34.0	38.6	42.0	45.1	45.0	45.1	51.5	46.3	45.4	46.0	51.9	5.3	11.4	7.4	10.0
NSA 31	255,818.0	4,256,438.0	40.0	34.0	38.6	42.0	46.4	46.4	46.4	52.8	47.3	46.6	47.1	53.1	7.3	12.6	8.5	11.2
NSA 32	255,862.6	4,256,460.2	40.0	34.0	38.6	42.0	46.5	46.4	46.4	52.8	47.3	46.7	47.1	53.2	7.3	12.7	8.5	11.2
NSA 33	256,713.5	4,256,688.0	40.0	34.0	38.6	42.0	47.8	47.7	47.8	54.2	48.4	47.9	48.3	54.4	8.4	13.9	9.7	12.5
NSA 34	256,976.5	4,256,525.2	40.0	34.0	38.6	42.0	45.6	45.6	45.6	52.0	46.7	45.9	46.4	52.4	6.7	11.8	7.8	10.5
NSA 35	253,764.8	4,258,874.6	40.0	34.0	38.6	42.0	43.8	43.7	43.8	50.1	45.3	44.1	44.9	50.7	5.3	10.1	6.3	8.8
NSA 36	252,838.8	4,259,941.2	40.0	34.0	38.6	42.0	45.1	45.1	45.1	51.5	46.3	45.4	46.0	52.0	5.3	11.4	7.4	10.0
NSA 37	252,168.1	4,258,767.5	40.0	34.0	38.6	42.0	43.2	43.1	43.2	49.5	44.9	43.6	44.5	50.2	4.9	9.6	5.9	8.3
NSA 38	252,427.8	4,258,477.8	40.0	34.0	38.6	42.0	43.4	43.3	43.4	49.8	45.1	43.8	44.6	50.4	5.1	9.8	6.1	8.5

Fleming 235 MWp
 Construction
 Noise Impact Assessment

Receiver	Construction Leq	Construction Lmax ¹	Combined Ambient + Calculated Noise Level, LAeq	Daytime Noise Level, Lday	Nighttime Noise Level, Lnight ²	Combined Ambient + Calculated Noise Level, Ldn	Potential Noise Increase, Ldn
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
NSA 1 - Church	65.8	69.3	62.9	65.2	34.0	62.9	20.9
NSA 2 - Residence	79.3	85.5	76.3	78.6	34.0	76.3	34.3
NSA 3 - Residence	74.1	79.6	71.1	73.4	34.0	71.1	29.1
NSA 4 - Residence	69.2	73.6	66.2	68.6	34.0	66.3	24.3
NSA 5 - Residence	69.1	73.9	66.1	68.5	34.0	66.1	24.1
NSA 6 - Residence	68.1	72.7	65.1	67.4	34.0	65.1	23.1
NSA 13 - Residence	70.7	75.1	67.7	70.0	34.0	67.7	25.7
NSA 14 - Residence	70.3	74.1	67.3	69.6	34.0	67.3	25.3
NSA 15 - Residence	71.6	76.6	68.6	70.9	34.0	68.6	26.6
NSA 16 - Residence	70.8	76.1	67.9	70.2	34.0	67.9	25.9
NSA 17 - Residence	71.4	76.3	68.4	70.7	34.0	68.4	26.4
NSA 18 - Residence	73.8	78.8	70.8	73.1	34.0	70.8	28.8
NSA 19 - Residence	79.9	85.5	76.9	79.3	34.0	76.9	34.9
NSA 20 - Residence	74.6	79.7	71.6	73.9	34.0	71.6	29.6
NSA 21 - Residence	78.0	83.8	75.0	77.4	34.0	75.0	33.0
NSA 22 - Residence	73.8	79.3	70.8	73.2	34.0	70.8	28.8
NSA 23 - Residence	71.5	76.5	68.5	70.8	34.0	68.5	26.5
NSA 26 - Residence	74.1	79.0	71.1	73.4	34.0	71.1	29.1
NSA 29 - Residence	75.1	79.5	72.1	74.4	34.0	72.1	30.1
NSA 30 - Residence	71.4	75.7	68.4	70.7	34.0	68.4	26.4
NSA 31 - Residence	73.5	78.2	70.5	72.9	34.0	70.5	28.5
NSA 32 - Residence	76.5	81.5	73.5	75.9	34.0	73.5	31.5
NSA 33 - Residence	69.7	74.7	66.7	69.1	34.0	66.7	24.7
NSA 34 - Residence	69.8	73.1	66.8	69.2	34.0	66.8	24.8
NSA 37 - Residence	82.9	89.5	79.9	82.2	34.0	79.9	37.9

¹ Calculated Lmax is the loudest individual value.

² Assumes daytime construction only

NSA 37
Fleming 235 MWp
Construction
Noise Impact Assessment

Project Land Use: residential

Description	Land Use	DTM Coordinates		Baselines (Representative Exposure Conditions) ¹			
		Latitude (m)	Longitude (m)	Wind	Day	Night	Other
NSA 37 - Residence	Residential	252168.07	4255767.45	39.6	<2.0	<0	34

¹Source: A-6, S12.9-22257 Part 2 - No transport or adverse conditions allowed (L) and USA for Very Quiet, 50m-60 Suburban or Rural (Noise).

Construction site location

Description	DTM Coordinates	
	Latitude (m)	Longitude (m)
Drawn 1	222218.01	4255765.12
Drawn 2 and 3	222218.00	422805.12

¹Drawn 1 - Station location is represented by the edge of the construction site (does not include pile driver)

²Drawn 2 and 3 - located at the east (opposite) corner location

Sources

Description	Quantity	Aerodynamic Usage Factor ¹	Noise Level Reference (dBA) ²	Sound Pressure Level to Reference Distance ³ (dBA)
Crane	1	18	83	81
Vibratory Pile Driver	1	28	73	103
Pickup Truck	1	40	59	75
Front End Loader	1	45	53	78
Tractor	1	50	53	80
Crane	2	18	83	81
Vibratory Pile Driver	2	28	73	103
Pickup Truck	1	40	59	75
Front End Loader	2	45	53	78
Tractor	2	50	53	80

¹HWY Construction Noise (reference) is 18 dBA @ 100m (ref) for crane reference levels and Usage factor

Results

Equipment	Leq @ NSA 37 - Residence (dBA)	Leq @ NSA 37 - Residence (dBA)
Crane	51.6	59.5
Vibratory Pile Driver	67.6	89.5
Pickup Truck	59.6	69.5
Front End Loader	53.6	64.5
Tractor	65.6	68.5
Crane	46.5	0.0
Vibratory Pile Driver	57.4	0.0
Pickup Truck	44.5	0.0
Front End Loader	48.5	0.0
Tractor	58.4	0.0
Total	62.9	89.5

No de Level assumes 1 Equipment is operating at all times

Receptor	Construction Leq	Construction Lmax ²	Combined Ambient + Calculated Noise Level, L ₅₀	Daytime Noise Level, L _{day}	Nighttime Noise Level, L _{night}	Combined Ambient + Calculated Noise Level, L _{dn}	Potential Noise Increase, L _{dn}
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)
NSA 37 - Residence	62.9	89.5	78.9	67.2	54.0	79.9	17.9

¹Ca is assumed noise from the construction site only

²Assumes all the construction only

APPENDIX C

Fugitive Dust Impact Calculations

Acciona Energy - Fleming County Solar Project
Air Quality
Emission Calculations
Construction Emissions: Earthmoving Activities

Fugitive Dust From Construction Operations: General Construction and Cut/Fill

Parameter	Value	Source / Notes
Total Acres Affected During Construction	397.5	Assumption based on project description
Total Months of Construction	7	Project Description
General Construction PM ₁₀ Emission Factor, ton/acre-month	0.011	WRAP Fugitive Dust Handbook, Table 3-2, "Level 2"
Assumed Control Efficiency, %	61%	WRAP Fugitive Dust Handbook, Table 3-6, for applying water at various intervals (3.2hr watering interval).

Note: No off-site haulage indicated or assumed. Total acres affected assumed to be 25% of facility acres.

Source: Based on WRAP Fugitive Dust Handbook, Table 3-2, "Recommended PM₁₀ Emission Factors for Construction Operations," Level 2. <http://www.wrapair.org/forums/dejt/fdh/content/final-handbook.pdf>

Annual Fugitive Dust Emissions From Construction Operations, in Tons

Source	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	VOC	HAPs	CH ₄	CO ₂	CO ₂ e
General Construction	-	-	-	11.94	1.19	-	-	-	-	-
Total Fugitive Emissions, tons	-	-	-	11.94	1.19	-	-	-	-	-

Note: PM_{2.5}/PM₁₀ ratio of 0.10 used from the WRAP Fugitive Dust Handbook, Section 3.3.1. On-site cut-fill emissions do not assume controls.

Example Calculation, General Construction: [Emission Factor, ton/acre-month] * [# of acres affected] * [# of months of construction/project] * [1 - Control Efficiency] = Tons of pollutant for duration of project

Example Calculation, On-Site Cut/Fill: [Emission Factor, ton/1,000 cu yds] * [total cu yds of material/1,000] = Tons of pollutant for duration of project

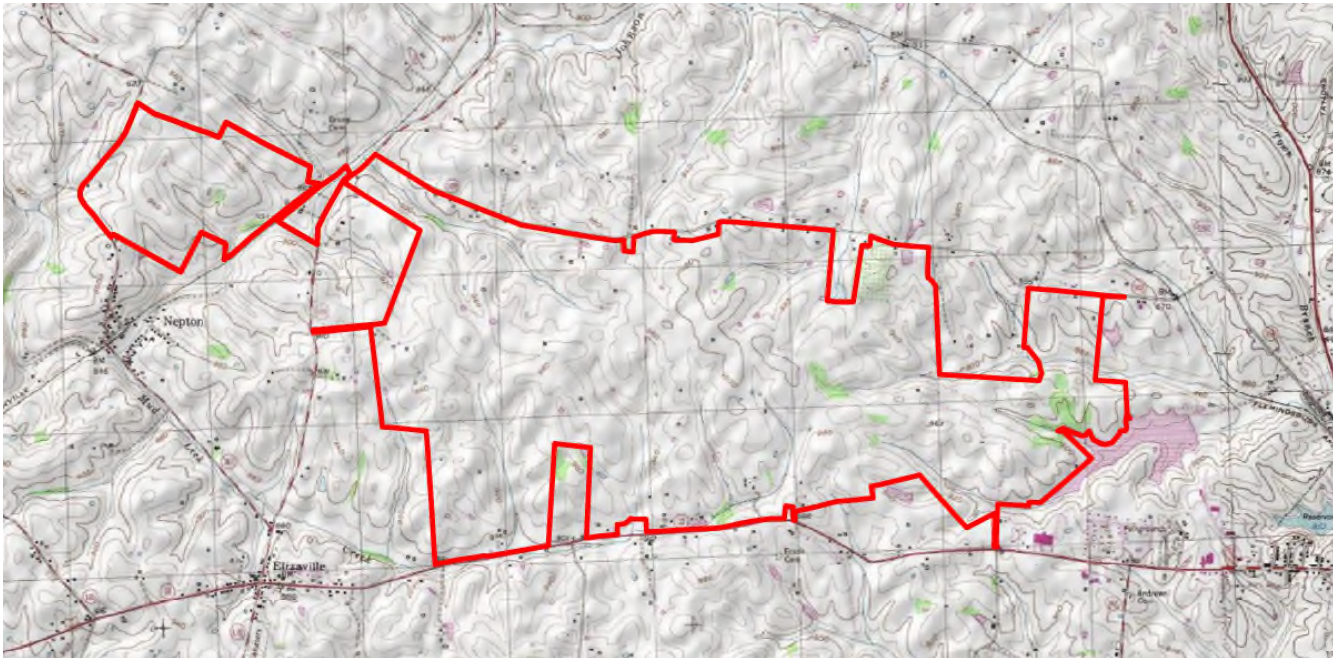
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APPENDIX D

Environmental Site Assessment – Phase I

Phase I Environmental Site Assessment

**Fleming Solar Project,
Fleming County, Kentucky**



July 15, 2020

PRESENTED TO

AEUG Fleming Solar, LLC
55 E Monroe Street, Suite 1925
Chicago, IL 60603

PRESENTED BY

Tetra Tech
222 S 15th Street, Suite 220
Omaha, NE 68102

EXECUTIVE SUMMARY

Tetra Tech, Inc. (“Tetra Tech”) performed a Phase I Environmental Site Assessment (“Phase I ESA”) of the Fleming solar project in Fleming County, Kentucky (hereafter, the “Subject Property”) for AEUG Fleming Solar, LLC (“AFS”). The purpose of this Phase I ESA was to identify current and historic recognized environmental conditions (“RECs”) in connection with the Subject Property, based on commonly known and reasonably ascertainable information, pursuant to the process described in American Society for Testing and Materials (“ASTM”) Standard Practice E2247-16.

To assess environmental conditions at the Subject Property, Tetra Tech reviewed site land use history, geology, hydrogeology, and environmental records for the Subject Property and its general vicinity; conducted a visual site reconnaissance; mailed questionnaires to conduct landowner interviews, and completed telephone interviews to inquire about current environmental conditions.

The Subject Property is approximately 2,420 acres and is located about 2 miles northwest of Flemingsburg in Fleming County, Kentucky. The Subject Property is primarily used for agricultural purposes, including hay production and grazing land, with residential and farmstead structures present.

The findings and conclusions of this Phase I ESA are as follows:

Recognized Environmental Conditions

This assessment revealed no RECs associated with the Subject Property.

Historic Recognized Environmental Conditions

This assessment has revealed evidence of the following Historic RECs associated with the Subject Property:

- A location on the Subject Property on a parcel owned by Brenda Perkins next to Elizaville Road was listed in the SPILLS database and identified as “Timothy Perkins Dairy Farm”. In 2008, there was a non-permitted discharge of sewage at this location from a lagoon next to the road at the dairy farm that released into a ditch that empties into the creek, presumably Mud Lick Creek. In 2011, there was a report of “manure pit draining” from this location into a creek. The status of these incidents is listed as “Closed-Mitigated”. In 2018, there was a report of an odor emanating from the Timothy Perkins Dairy Farm that led to the discovery of many dead animals at this location. Disposal and release of animal waste at this parcel to a ditch and Mud Lick Creek may have caused soil and surface water contamination on the Subject Property that includes *E. coli*, nitrates, phosphorus, ammonia, zinc, and copper. Of these, phosphorus and ammonia are considered hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”). Because both reported release events are listed as “Closed-Mitigated” by the Kentucky Department for Environmental Protection, soil and surface water contamination due to disposal and release of animal waste on the parcel owned by Brenda Perkins is considered an Historic REC for the Subject Property.

- Solid waste disposal in a sinkhole was reported in the landowner questionnaire on the parcel owned by Mary and John Vibbert. The landowner reported the sinkhole is at the front edge of the parcel and was historically used to dispose of unburnable material. Since then, metal has been removed from the sinkhole, and more recently, only biodegradable materials have been placed in it, such as brush. Metal disposed in the sinkhole may have been a hazardous substance under CERCLA. Because it has been removed, it is considered an Historic REC for the Subject Property.

De minimis Conditions

This assessment revealed the following *de minimis* conditions on the Subject Property:

- Spills of fuel from aboveground storage tanks and residual agricultural chemicals on the Subject Property are likely to have occurred during agricultural operations. These spills and residual agricultural chemicals are considered a *de minimis* condition because there is no evidence that indicates they resulted in a threat to human health or the environment.
- Several areas on the western and northern portions of the Subject Property were observed to have disposed waste, including drums, tires, scrap metal, debris, and dilapidated vehicles. These waste materials are considered a *de minimis* condition because there is no evidence that indicates disposal of these materials resulted in a threat to human health or the environment.

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Purpose	1
1.2 Scope of Services	1
1.3 Significant Assumptions	1
2.0 SITE DESCRIPTION AND PHYSICAL SETTING	2
2.1 Site Location and Legal Description	2
2.2 Site and Vicinity General Characteristics	2
2.3 Site Hydrogeology	3
2.4 Current and Past Uses of the Subject Property	3
2.5 Description of Structures, Roads, and Other Improvements	4
2.6 Current and Past Uses of Adjacent Properties	4
3.0 SITE DESCRIPTION AND PHYSICAL SETTING	5
3.1 User Questionnaire	5
3.2 Title Records	5
3.3 Environmental Liens or Activity and Use Limitations	5
3.4 Specialized Knowledge	5
3.5 Commonly Known or Reasonably Ascertainable Information	5
3.6 Valuation Reduction for Environmental Issues	5
3.7 Obvious Indicators of the Presence or Likely Presence of Contamination	5
3.8 Owner, Property Manager, and Occupant Information	5
3.9 Reason for Performing Phase I ESA	5
3.10 Other	5
4.0 RECORDS REVIEW	6
4.1 Physical Setting	6
4.2 Environmental Database information	7
4.3 Historical Use Information	13
4.3.1 Property Abstract	13
4.3.2 Aerial Photographs	14
4.3.3 Historic Topographic Maps	14
5.0 SITE RECONNAISSANCE	15
5.1 Methodology and Limiting Conditions	15
5.2 General Site Setting	15
5.3 Exterior Observations	15

5.3.1	Surface Staining and/or Stressed Vegetation	15
5.3.2	Drums, Aboveground Storage Tanks, and Containers	15
5.3.3	Evidence of Waste Disposal	16
5.3.4	Fill Material	16
5.3.5	Transformers	16
5.3.6	Vents, Air Stacks, and Odors	16
5.3.7	Underground Storage Tanks	17
5.3.8	Wells	17
5.3.9	Septic Systems	17
5.3.10	Alteration in Vegetation	17
5.4	Interior Observations	17
6.0	INTERVIEWS	17
6.1	Site Owners	17
6.2	Local Fire Department	18
6.3	Local Health Department	18
7.0	CONCLUSIONS	18
7.1	recognized Environmental Conditions	19
7.2	Historic recognized Environmental Conditions	19
7.3	De Minimis Conditions	19
7.4	Data Gaps	19
8.0	DEVIATIONS	20
9.0	LIMITATIONS	20
9.1	Special Terms and Conditions	20
9.2	Limitations and Exceptions	20
9.3	User Reliance	21
10.0	REFERENCES CITED	21
11.0	QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL	22

LIST OF TABLES

TABLE 1	Subject Property Description Using the Public Land Survey System
TABLE 2	Summary of Current and Past Uses of Adjacent Properties
TABLE 3	Physical Setting Information
TABLE 4	Databases Searched and Number of Facilities Identified
TABLE 5	Summary of Information from Aerial Photographs
TABLE 6	Summary of Information from Topographic Maps

FIGURES

FIGURE 1. PROJECT VICINITY

FIGURE 2. PROJECT MAP

APPENDICES

APPENDIX A.	PHOTOGRAPHIC DOCUMENTATION
APPENDIX B.	EDR AREA/CORRIDOR REPORT
APPENDIX C.	EDR AERIAL PHOTOGRAPHS
APPENDIX D.	EDR HISTORICAL TOPO MAP REPORT
APPENDIX E.	EDR DATAMAP™ WELL SEARCH REPORT
APPENDIX F.	LANDOWNER QUESTIONNAIRES

1.0 INTRODUCTION

1.1 PURPOSE

Tetra Tech, Inc. (“Tetra Tech”) performed a Phase I Environmental Site Assessment (“Phase I ESA”) of the Fleming solar project in Fleming County, Kentucky (hereafter, the “Subject Property”) for AEUG Fleming Solar, LLC (“AFS”). The purpose of this Phase I ESA was to identify current and historic recognized environmental conditions (“RECs”) in connection with the Subject Property, based on commonly known and reasonably ascertainable information, pursuant to the process described in American Society for Testing and Materials (“ASTM”) Standard Practice E2247-16. This evaluation includes identifying RECs, historic RECs, and *de minimis* conditions associated with the Subject Property, as defined below:

REC: “...the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.”

Historic REC: “A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).”

***De minimis* Condition:** “A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.”

1.2 SCOPE OF SERVICES

The scope of services was defined in Tetra Tech’s proposal dated June 5, 2020. This Phase I ESA conforms to ASTM Standard Practice E2247-16, with the exception of any deviations described in Section 8.0 and is subject to the limitations described in Section 9.0 of this report.

1.3 SIGNIFICANT ASSUMPTIONS

Tetra Tech assumes that all information obtained from others for the Subject Property is correct and complete. No other significant assumptions associated with the Subject Property were made for this report.

2.0 SITE DESCRIPTION AND PHYSICAL SETTING

2.1 SITE LOCATION AND LEGAL DESCRIPTION

The Subject Property is approximately 2,420 acres and is located about 2 miles northwest of Flemingsburg in Fleming County, Kentucky. It is approximately bordered by Convict Pike to the north, Highway 11 to the east, Highway 32 to the south, and Nepton Road to the west. This part of Kentucky does not use the Public Land Survey System. Parcels that comprise the Subject Property are described by landowner and size in Table 1 below.

Table 1. Subject Property Description

Landowner	Parcel Size (Acres)
Randy and Marcylena Barker	284
Curt and Vanessa Fawns	150
Mary and John Vibbert	147
Susan Dorsey Ramey	85
Brenda Perkins	21
	54
	141
	41
	130
Timothy Cropper	103
Earline Spencer	135
Steven Dale Brown and Karen J. Brown and William D. and Laura Suit Brown	151
Samuel and Cibina Harris	59
	101
Eugene Crain	329
Shannon Trusts and Hurd Family	30
	302
William and Jacquelyn McCord	63
Brian and Julie Clark	101
Jeff and Angie Stephens	95
Terry and Gayle Ann Vice	94

Maps of the Subject Property are presented in Figures 1 and 2.

2.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The Subject Property and vicinity characteristics, as noted during the reconnaissance conducted June 15 and 16, 2020, by David Hermance of Tetra Tech, are described in this Section 2.0 and throughout the remainder of this

report. The Subject Property consists of approximately 2,420 acres of land primarily used for agricultural purposes, including hay production and cattle grazing, with residential and farmstead structures.

The Subject Property is located northwest of Flemingsburg in Fleming County, Kentucky. The vicinity consists of rolling hills with agricultural properties primarily used for hay production and grazing lands, small streams, farm ponds, residential properties, a private lake, public and private roads, a railroad right-of-way, the City of Flemingsburg, and the unincorporated community of Elizaville. Photographs of the Subject Property are included in Appendix A, and photograph locations are shown in Figure 2.

2.3 SITE HYDROGEOLOGY

The Environmental Data Resources, Inc. (“EDR”) DataMap™ Well Search Report identified no natural gas wells or groundwater wells on the Subject Property (see Appendix G of this Phase I ESA). It is assumed that near-surface groundwater generally flows with the topographic gradient.

The Well Search Report identified a public water supply (“PWS”) owned by Fleming County Water Association on the Subject Property near the eastern boundary. The source of the PWS is surface water, and several violations of the Clean Drinking Water Act were issued to the PWS between 1998 and 2013, including violations of the lead and copper rule, consumer confidence rule, and coliform monitoring and reporting.

The Kentucky Water Health Portal provides a geographical compilation of surface water quality information. The data indicates that tributaries and creeks within the Subject Property have not been monitored for water quality by the Kentucky Division of Water; however, receiving waters for these tributaries and creeks indicate impairment due to fecal coliform likely from animal feeding operations and livestock grazing.

According to the EDR Area/Corridor Report and the Federal Emergency Management Agency (“FEMA”) “Stay Dry” Google Earth GIS flood zone mapping application, there are small areas of 100-year flood hazard area (Zone A) surrounding Mud Lick Creek along Highway 32 on the southern border of the Subject Property and surrounding Johnson Creek between the railroad and Highway 170/Junction Road in the northwest portion of the Subject Property. The remainder of the Subject Property is identified as Zone X, meaning that it is an area of minimal flood hazard.

National Wetland Inventory (“NWI”) wetlands categorized as riverine, freshwater pond, and freshwater emergent were identified on the Subject Property by the U.S. Fish and Wildlife Service wetland identification application. Wetland locations are described in Table 3 below.

2.4 CURRENT AND PAST USES OF THE SUBJECT PROPERTY

The Subject Property is used for residential and agricultural purposes. Based on landowner interviews, the Subject Property was used for residential and agricultural purposes since the area was settled in the late 18th century.

2.5 DESCRIPTION OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS

Structures and improvements on the Subject Property include:

- Residential and farmstead structures (i.e., various structures associated with agricultural operations including barns, grain storage, out buildings, and aboveground storage tanks);
- County and township roads within public right-of-ways;
- Private roads;
- Private cemetery;
- Railroad; and
- Electric power distribution infrastructure within public right-of-ways, including transmission poles, transmission lines, and pole-mounted transformers.

Photographs of onsite structures and other improvements on the Subject Property are included in Appendix A.

2.6 CURRENT AND PAST USES OF ADJACENT PROPERTIES

The vicinity of the Subject Property consists of residential and agricultural properties. The City of Flemingsburg and the unincorporated community of Elizaville are east and southwest of the Subject Property, respectively. The following table describes the current and past uses of the properties adjacent to the Subject Property, determined through analysis of topographic maps, aerial photographs, interviews, and visual reconnaissance.

Table 2. Summary of Current and Past Uses of Adjacent Properties

Direction	Current Use	Past Use
North	Residential, agricultural, KY Hwy 559 (a.k.a., Convict Pike), Whisman Road, and Village of Fleming Junction.	1947 – Present: Residential, agricultural, KY Hwy 559 (a.k.a., Convict Pike), Whisman Road, and Village of Fleming Junction.
South	Residential, agricultural, Flemingsburg High School, church, KY Hwy 32, Craintown Road, and Cassidy Pike.	1947 – 1975: Residential, agricultural, KY Hwy 32, Craintown Road, and Cassidy Pike. 1975 – Present: Residential, agricultural, Flemingsburg High School, church, KY Hwy 32, Craintown Road, and Cassidy Pike.
East	Residential, agricultural, KY Hwy 11, private man-made lake, and City of Flemingsburg.	1947 – 1975: Residential, agricultural, KY Hwy 11, and City of Flemingsburg. 1975 – Present: Residential, agricultural, KY Hwy 11, private man-made lake, and City of Flemingsburg.
West	Residential, agricultural, Villages of Elizaville and Nepton, railroad line, Junction Road, and Nepton Road.	1947 – Present: Residential, agricultural, Villages of Elizaville and Nepton, railroad line, Junction Road, and Nepton Road.

3.0 SITE DESCRIPTION AND PHYSICAL SETTING

3.1 USER QUESTIONNAIRE

The User Questionnaire presented in ASTM Standard E2247-16, Appendix X.3, was provided to Ms. Mary Connor, Senior Manager – Environmental, Social and Sustainability at AFS. The information provided in subsections 3.2 through 3.10 below was ascertained from her responses received June 22, 2020.

3.2 TITLE RECORDS

No title records for the Subject Property were provided by AFS.

3.3 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

According to AFS, no environmental liens or activity and use limitations for the Subject Property are in place or have been filed or recorded in a registry under federal, state, or local law.

3.4 SPECIALIZED KNOWLEDGE

AFS has no specialized knowledge or experience related to the Subject Property.

3.5 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

AFS is unaware of commonly known or reasonably ascertainable information about the Subject Property.

3.6 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

AFS stated that it is unknown if the purchase price for the Subject Property reasonably reflects its fair market value.

3.7 OBVIOUS INDICATORS OF THE PRESENCE OR LIKELY PRESENCE OF CONTAMINATION

AFS reported no obvious indicators that point to the presence or likely presence of contamination at the Subject Property based on their knowledge and experience related to the Subject Property.

3.8 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

AFS provided the names and contact information of the owners and/or managers of the Subject Property.

3.9 REASON FOR PERFORMING PHASE I ESA

AFS is developing a solar electric generation facility. Therefore, this Phase I ESA is being conducted to determine if environmental concerns are present on the Subject Property prior to development.

3.10 OTHER

No other information was provided by AFS.

4.0 RECORDS REVIEW

4.1 PHYSICAL SETTING

Physical setting characteristics pertinent to the Subject Property are summarized in Table 3 below.

Table 3. Physical Setting Information

Conditions	Source	Description
TOPOGRAPHY		
Elevation (amsl)	EDR Historical Topo Map Report	950 to 1020 feet
Topographic Gradient	EDR Historical Topo Map Report	Localized ridges and valleys result in varied topography throughout the Subject Property with the central portions generally as the topographical high sloping down toward the Subject Property boundaries in each direction.
Coordinates	AFS	Latitude (North): 38° 25' 51.59" Longitude (West): 83° 47' 17.67"
HYDROLOGY		
Surface Water Runoff	EDR Historical Topo Map Report, 2012 Topographic Map; U.S Fish and Wildlife Service National Wetlands Inventory; Visual observation	Directed by localized variations in surface elevation. Surface water runoff generally flows west or north into tributaries of Johnson Creek, east into tributaries of Town Branch, or south and west into tributaries of Mud Lick Creek.
Flood Plain	FEMA Flood Map Number 21069C0100C (May 20, 2010); EDR Report	Most of the Subject Property is an area of minimal flood hazard (Zone X). There is a 100-year flood hazard area (Zone A) along Highway 32 on the southern border of the Subject Property and between the railroad and Highway 170/Junction Road in the northwest portion of the Subject Property.
Wetlands	U.S Fish and Wildlife Service National Wetlands Inventory	The following Freshwater Emergent Wetlands were identified on the Subject Property: <ul style="list-style-type: none"> • 0.33-acre wetland immediately south of Convict Pike on the north side of the Subject Property; and • 0.32-acre wetland immediately north of Highway 32 on south side of Subject Property.
GEOLOGY		
Onsite wells	EDR DataMap™ Well Search Report	No groundwater wells are reported on the Subject Property. Within 1 mile of the Subject Property, there are 26 monitoring or remediation wells within the Flemingsburg and Elizaville city limits. The depths of these wells were not reported.
Nearest Oil and Gas Wells	EDR DataMap™ Well Search Report	No oil and gas wells were identified on or within 1.0 mile of the Subject Property.
Geologic Conditions	Kentucky Geological Survey, U.S. Department of Agriculture Natural Resources Conservation Service's Web Soil Survey	Bedrock in this portion of Fleming County is largely limestone and shale that is Ordovician in age, part of the Bull Fork formation, and low in karst potential, with Grant Lake Limestone that is medium in karst potential underlying drainage areas. The major shallow soil types within the Subject Property are silt loams (approximately 80% Lowell-Faywood and Lowell-Sandview silt loam), which are well-drained soil types with variable infiltration rates. Soil pH is reported between 4.5 and 7.8 standard units.

4.2 ENVIRONMENTAL DATABASE INFORMATION

Tetra Tech reviewed federal, state, and local environmental records pertaining to the Subject Property and vicinity. In performing this review, Tetra Tech used the services of EDR, a vendor specializing in the search and retrieval of government environmental databases. These federal, state, and local databases include information regarding reported hazardous materials use and storage; facilities that treat, store, dispose, or generate hazardous waste; solid waste landfills, transfer stations, and incinerators; leaking underground storage tanks; discharges of petroleum and other hazardous substances; and reported incidents of contamination.

The EDR Area/Corridor Report is presented in Appendix B and includes: (1) a map showing the approximate locations of sites identified (if any) within a 1.0-mile radius of the Subject Property boundary; (2) a complete listing of findings; and (3) descriptions of the databases searched. “Approximate minimum search distances” are the distances beyond the Subject Property boundary required to be included in the search of the “Standard Environmental Record Sources” and are specified in subsection 8.2.1.1 of ASTM Standard Practice E2247-16. To ensure sufficient research up to and including the “approximate minimum search distances” beyond the Subject Property boundaries, a 2-mile radius search was conducted around the target coordinates central to the Subject Property.

Table 4. Databases Searched and Number of Facilities Identified

Database		Facilities
Federal Records from Standard Sources		
NPL	National Priority List	0
Proposed NPL	Proposed National Priority List Sites	0
NPL LIENS	Federal Superfund Liens	0
DELISTED NPL	National Priority List Deletions	0
FEDERAL FACILITY	Federal Facility Site Information listing	0
SEMS	Superfund Enterprise Management System	0
SEMS-ARCHIVE	Superfund Enterprise Management System Archive	0
CORRACTS	Corrective Action Report	0
RCRA-TSDF	RCRA - Treatment, Storage, and Disposal	0
RCRA-LQG	RCRA - Large Quantity Generators	0
RCRA-SQG	RCRA - Small Quantity Generators	0
RCRA-VSQG	RCRA – Very Small Quantity Generators	0
LUCIS	Land Use Control Information System	0
US ENG CONTROLS	Engineering Controls Sites List	0
US INST CONTROL	Sites with Institutional Controls	0
ERNS	Emergency Response Notification System	0

Database		Facilities
State and Tribal Records from Standard Sources		
SHWS	State Leads List	3
SWF/LF	Solid Waste Information System	0
PSTEAF	Underground Storage Tank Branch Facility Ranking List	0
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land	0
SB193	SB 193 Branch Site Inventory List for UST Permanent Closures	0
FEMA UST	FEMA Underground Storage Tank Listing	0
UST	Active UST Facilities	0
AST	Aboveground Petroleum Storage Tank Facilities	1
INDIAN UST	Underground Storage Tanks on Indian Land	0
ENG CONTROLS	Engineering Controls Site Listing	0
INST CONTROL	Institutional Controls Site Listing	0
INDIAN VCP	Voluntary Cleanup Priority Listing	0
VCP	Voluntary Cleanup Program Sites	0
BROWNFIELDS	Municipal Brownfields Redevelopment Grant Program Project Descriptions	0
Additional Environmental Federal, State, Tribal, and Local Records		
US BROWNFIELDS	A Listing of Brownfields Sites	0
SWRCY	Recycling Facilities	0
HIST LF	Historical Landfills	0
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	0
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	0
ODI	Open Dump Inventory	0
IHS OPEN DUMPS	Open Dumps on Indian Land	0
US HIST CDL	National Clandestine Laboratory Register	0
CDL	Meth Drug Lab Site Listing	0
US CDL	Clandestine Drug Labs	0
LIENS 2	CERCLA Lien Information	0
HMIRS	Hazardous Materials Information Reporting System	0
SPILLS	State Spills	5
Other Ascertainable Records		
RCRA NonGen/NLR	RCRA – Non Generators	0
FUDS	Formerly Used Defense Sites	0
DOD	Department of Defense Sites	0
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	0
US FIN ASSUR	Financial Assurance Information	0
EPA WATCH LIST	EPA WATCH LIST	0

Database		Facilities
2020 COR ACTION	2020 Corrective Action Program List	0
TSCA	Toxic Substance Control Act	0
TRIS	Toxic Chemical Release Inventory System	0
SSTS	Section 7 Tracking Systems	0
ROD	Records of Decision	0
RMP	Risk Management Plans	0
RAATS	RCRA Administrative Action Tracking System	0
PRP	Potentially Responsible Parties	0
PADS	PCB Activity Database System	0
ICIS	Integrated Compliance Information System	0
FTTS	FIFRA/ TSCA Tracking System	0
MLTS	Material Licensing Tracking System	0
COAL ASH DOE	Steam-Electric Plant Operation Data	0
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	0
PCB TRANSFORMER	PCB Transformer Registration Database	0
RADINFO	Radiation Information Database	0
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	0
DOT OPS	Department of Transportation, Office of Pipeline Safety Incident and Accident data	0
CONSENT	Superfund (CERCLA) Consent Decrees	0
INDIAN RESERV	Indian Reservations	0
FUSRAP	Formerly Utilized Sites Remedial Action Program	0
UMTRA	Uranium Mill Tailings Sites	0
LEAD SMELTERS	Lead Smelter Sites	0
US AIRS	Aerometric Information Retrieval System Facility Subsystem	0
US MINES	Mines Master Index File	0
ABANDONED MINES	Abandoned Mine Land Inventory	0
FINDS	Facility Index System/Facility Registry System	1
DOCKET HWC	Hazardous Waste Compliance Docket Listing	0
ECHO	Enforcement & Compliance History Information	0
UXO	Unexploded Ordnance Sites	0
FUELS PROGRAM	EPA Fuels Program Registered Listing	0
AIRS	Permit and Emissions Inventory Data	1
ASBESTOS	Asbestos	0
COAL ASH	Coal Ash Site Listing	0
DRYCLEANERS	Listing of drycleaner facility locations	0
FINANCIAL ASSURANCE	Financial Assurance Information Listing	0

Database		Facilities
LEAD	Environmental Lead Program Report Tracking Database	0
NPDES	NPDES Permits Listing	0
UIC	UIC Wells Listing	0
MINES MRDS	Mineral Resources Data System	0
EDR Databases		
EDR MGP	EDR Proprietary Manufactured Gas Plants	0
EDR Hist Auto	EDR Exclusive Historic Gas Stations	0
EDR Hist Cleaner	EDR Exclusive Historic Dry Cleaners	0
RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List	0
RGA LF	Recovered Government Archive Solid Waste Facilities List	0

EDR's database review identified the following facilities on the Subject Property:

LAZY OAKS FARM at 69 Lazy Oaks Ln, Flemingsburg, KY. The address of this facility is located on the western portion of the Subject Property and was identified in the FINDS database due to active status in Kentucky Department for Environmental Protection ("KDEP") database for "AGR - Cattle Ranching and Farming". Research in the KDEP Agency Interest online database indicates that no public records are available online, and the facility is not listed in other databases. Cattle ranching and farming activities at the facility are not considered a REC for the Subject Property.

VERIZON WIRELESS – NETWORK OPERATIONS (MAIN) – AMY at 1963 Convict Pike, Flemingsburg, KY. The address of this facility is located on the northern portion of the Subject Property and was identified in the AST and AIRS databases.

Identification in the AST database is due to registration of an AST under permit number PAG0003931 issued in 2010. No releases from the AST or regulatory violations were reported with the AST.

The identification in the AIRS database is due to operation of a stationary reciprocating internal combustion engine ("RICE") subject to 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants ("NESHAP"). No regulatory violations were reported in association with operation of the RICE. Presence and operation of an AST and a RICE are not considered a REC for the Subject Property.

1831 CONVICT PIKE, FLEMINGSBURG, KY. The location, identified by the EDR database search to be on the northern portion of the Subject Property, was identified in the SPILLS database due to report of an odor emanating from Timothy Perkins Dairy Farm's manure catch pond in 2005, which was located across the road (on adjacent property). The report status was closed without further action and was listed as routine priority level. The odor from the manure catch pond on an adjacent property is not considered a REC for the Subject Property.

EWING, KY and FLEMINGSBURG, KY. The locations were identified by the EDR database search to be on the southern portion of the Subject Property on a parcel owned by Brenda Perkins identified as “Timothy Perkins Dairy Farm” and were listed in the SPILLS database (4 occurrences). The first occurrence was in 2008 and was due to a report of a non-permitted discharge of sewage from a lagoon next to the road at the dairy farm released into a ditch that empties into the creek, presumably Mud Lick Creek due to the location. The second occurrence was in 2011 and was due to a report of “manure pit draining” into a creek. The status of these incidents is listed as “Closed-Mitigated”. The other two occurrences were due to a report of an odor emanating from the Timothy Perkins Dairy Farm in 2018 and subsequent KDEP investigation into the report. KDEP reported discovering many dead animals located on the property. Disposal and release of animal waste at this parcel to a ditch and Mud Lick Creek may have caused soil and surface water contamination on the Subject Property that includes *E. coli*, nitrates, phosphorus, ammonia, zinc, and copper. Of these, phosphorus and ammonia are considered CERCLA Hazardous Substances. Because both reported release events are listed as “Closed-Mitigated” by KDEP, soil and surface water contamination due to disposal and release of animal waste on the parcel owned by Brenda Perkins is considered an Historic REC for the Subject Property.

The following facilities were identified within ASTM Standard search distances of the Subject Property:

FLEMING TIRE SERVICE INC at KY 11 – Bypass N, Flemingsburg, KY. This facility is located within the city limits of Flemingsburg, approximately 0.5 miles east of the eastern boundary of the Subject Property, and was identified in the SHWS database due to petroleum cleanup in 1996. The facility is listed as “Closed – Restored” and the closure option as “Option C – Restored”. Based on distance from the Subject Property and topography, it is unlikely that released petroleum from the facility impacted the Subject Property, and therefore, it is not considered a REC for the Subject Property.

FLEMING COUNTY STATE MAINTENANCE GARAGE #13 at 822 Elizaville Rd Flemingsburg. This facility is located within the city limits of Flemingsburg, approximately 0.7 miles east of the eastern boundary of the Subject Property, and was identified in the SHWS database. The regulatory description reported by EDR indicates that the site was “State Superfund”. The site status is listed as “Closed” as of March 8, 2004 under “Closure Option: Option C Restored”. No other information was available for this facility in the EDR report or in state online databases. Based on distance from the Subject Property and topography, it is unlikely that contamination from the facility impacted the Subject Property, and therefore, it is not considered a REC for the Subject Property.

FLEMING CO HOSPITAL at 920 Elizaville Rd, Flemingsburg, KY. This facility is located within the city limits of Flemingsburg, approximately 0.75 miles east of the eastern boundary of the Subject Property, and was identified in the SHWS and UST databases.

The regulatory description reported by EDR indicates that the site was “State Superfund”. The site status is listed as “Closed” as of August 26, 1994 under “Closure Option: Option C Restored”. No other information

was available for this facility in the EDR report or in state online databases. Based on distance from the Subject Property and topography, it is unlikely that contamination from the facility impacted the Subject Property, and therefore, it is not considered a REC for the Subject Property.

The UST listing is due to the former presence of three USTs at the facility. According to EDR records: (1) an 8,000-gallon UST for diesel storage and distribution was installed in 1962 and removed in 1999, (2) a 550-gallon UST for diesel storage and distribution was installed in 1984 and removed in 1999, and (3) a 250-gallon UST for fuel oil storage was installed in 1980 and removed in 1992. No records of contamination or further regulatory action are provided by EDR or available online from KDEP. Based on distance from the Subject Property and no records of contamination, the former presence of USTs at this property is not considered a REC for the Subject Property.

Orphan sites, according to EDR, are not considered in the foregoing analysis due to poor or inadequate address information. The following orphan sites were identified in the EDR database review:

ELIZAVILLE STATION at the junction of State Highway 32 and 170. This facility is located in the unincorporated village of Elizaville, approximately 0.75 miles west of the southwest corner of the Subject Property and at a lower elevation than the Subject Property. The facility was listed in the Financial Assurance database with an approval date of January 20, 2000 for coverage up to \$1 million effective from the time of release to the end of the cleanup. Research into the site using the KDEP online database search indicates that a gasoline station was formerly located at the site. No additional details are provided. Based on the distance from the Subject Property and topography, it is unlikely that contamination from the facility impacted the Subject Property, and therefore, it is not considered a REC for the Subject Property.

ROYAL DAIRY FARM at Junction Rd, Ewing, KY. Additional address information indicates that the facility is located approximately 3 miles north of Nepton, Kentucky, which is outside of standard database search distances. Thus, the facility is not considered in this assessment.

FLEMINGSBURG HOSPITAL – Pete Midde at 920 Elizaville Avenue, Flemingsburg, KY. This facility is located at the Fleming County Hospital within the city limits of Flemingsburg, approximately 0.75 miles east of the eastern boundary of the Subject Property, and was listed in the ASBESTOS database due to asbestos removal conducted during renovations in 2008. Former presence of asbestos and removal activities on a property that is 0.75 miles from the Subject Property is not considered a REC for the Subject Property.

KYTC at 16 Pike Bluff and 5664 Elizaville Rd, KY. The address is located approximately 1.52 miles southwest of the Subject Property, which is outside of standard database search distances. Thus, the facility is not considered in this assessment.

STEVE'S LAKEWOOD SERVICE at 719 Elizaville Ave, Flemingsburg, KY. This address located within the city limits of Flemingsburg, approximately 0.9 miles southeast of the Subject Property, was listed in the SB193 and Financial Assurance databases due to soil and groundwater contamination associated with

release from a UST. The Financial Assurance database listing indicates an approval date of August 2, 1998 for coverage up to \$1 million effective from the time of release to the end of the cleanup. Based on distance from the Subject Property and topography, it is unlikely that contamination from the facility impacted the Subject Property, and therefore, it is not considered a REC for the Subject Property.

ASHLAND INC #239-004 and ASHLAND PETROLEUM COMPANY #239-000 on Elizaville Rd, Flemingsburg, KY. This facility is listed in the RCRA Non-Gen/NLR database due to elimination of processes that generate hazardous waste. No additional information about facility location, spills, releases, or regulatory violations is provided by EDR or available from KDEP's online database. This facility is not considered a REC for the Subject Property.

KENTUCKY DEPARTMENT OF HIGHWAYS at Hwy 559 Convict Pike, Flemingsburg, KY. This facility is listed in the RCRA Non-Gen/NLR database due to elimination of processes that generate hazardous waste. No additional information about facility location, spills, releases, or regulatory violations is provided by EDR or available from KDEP's online database. This facility is not considered a REC for the Subject Property.

FLEMING-MASON RURAL ELECTRIC on Elizaville Rd, Flemingsburg, KY. This facility located on adjacent property south of the Subject Property is listed in the PADS database due to PCB-related activities (storage, transportation, and waste generation) as reported to the U.S. EPA. No reports of spills, releases, or regulatory violations are reported by EDR or available through KDEP's online database. These activities are not considered a REC for the Subject Property.

CHARTER COMMUNICATIONS on Cassidy Pike, Flemingsburg, KY. This facility is listed in the AIRS database due to operation of a stationary engine. No reports of spills, releases, or regulatory violations are reported by EDR or available through KDEP's online database. Operation of this stationary RICE is not considered a REC for the Subject Property.

FLEMING-MASON ENERGY COOPERATIVE (ADMIN OFFICE) at 1449 Elizaville Ave, Flemingsburg, KY. This facility is located approximately 0.5 miles southeast of the Subject Property and was listed in the ASBESTOS database due to asbestos removal conducted during renovations in 2007. Former presence of asbestos and removal activities on this property is not considered a REC for the Subject Property.

4.3 HISTORICAL USE INFORMATION

Historical use information for the Subject Property was obtained through review of historic aerial photographs and topographic maps. Summaries of the historical use information are included in the following sections.

4.3.1 Property Abstract

An abstract of the Subject Property was not provided for review as part of this Phase I ESA.

4.3.2 Aerial Photographs

Tetra Tech obtained historic aerial photographs for the Subject Property from EDR and additional aerial photographs were viewed in Google™ Earth Pro. The following table provides a summary of the information gathered from each photograph. Aerial photographs are presented in Appendix C.

Table 5. Summary of Information from Aerial Photographs

Year	Source	Comments
1947	EDR	The Subject Property is dominated by evidence of agricultural activities with structures along public and private roads throughout the Subject Property. A railroad line transects the Subject Property on the western portion. Adjacent properties in all directions include agricultural land and small roads with structures along the roads.
1950	EDR	No discernible changes from the 1947 aerial photograph.
1960	EDR	Forested areas throughout the Subject Property show higher density than the 1950 aerial photograph.
1975	EDR	A lake is shown on adjacent property to the east. Additional structures are shown on adjacent properties to the southeast.
1983	EDR	A forested area on the east central portion of the Subject Property has higher density.
1995	EDR	No discernible changes from the 1983 aerial photograph.
2004	EDR	No discernible changes from the 1995 aerial photograph.
2008	Google™ Earth Pro	No discernible changes from the 2004 aerial photograph.
2010	Google™ Earth Pro	No discernible changes from the 2008 Google Earth Pro imagery.
2013	Google™ Earth Pro	No discernible changes from the 2010 Google Earth Pro imagery.
2016	Google™ Earth Pro	No discernible changes from the 2013 Google Earth Pro imagery.

4.3.3 Historic Topographic Maps

Tetra Tech obtained historic USGS topographic maps for the Subject Property through EDR. The following table provides a summary of the information gathered from each map. The historic topographic maps are presented in Appendix D.

Table 6. Summary of Information from Topographic Maps

Quad	Year	Scale	Comments
Flemingsburg; Elizaville; Mays Lick	1951 - 1952	1:24,000	A railroad line transects the western portion of the Subject Property. The majority of the structures depicted are along roads on the edges of the Subject Property with some structures depicted in central areas of the Subject Property. The Villages of Elizaville and Nepton are depicted west and southwest of the Subject Property, respectively.

Quad	Year	Scale	Comments
Flemingsburg; Elizaville; Mays Lick	1978 - 1979	1:24,000	Additional structures are depicted on adjacent property southeast of the Subject Property. A lake is depicted immediately east of the Subject Property.
Flemingsburg; Elizaville; Mays Lick	2013	1:24,000	Additional roads are depicted on adjacent property southeast of the Subject Property.

5.0 SITE RECONNAISSANCE

5.1 METHODOLOGY AND LIMITING CONDITIONS

A reconnaissance of the Subject Property was performed by Mr. David Hermance on June 15 and 16, 2020. Access to interiors of residential and agricultural structures was not available during the site reconnaissance. This limiting condition is not considered to be a significant data gap. No other limiting conditions were experienced during the reconnaissance.

5.2 GENERAL SITE SETTING

The Subject Property is located northwest of Flemingsburg in Fleming County, Kentucky. The vicinity consists of rolling hills with agricultural properties primarily used for hay production and grazing lands, small streams, farm ponds, residential properties, a private lake, public and private roads, a railroad right-of-way, the City of Flemingsburg, and the unincorporated community of Elizaville. Photographs of the Subject Property are included in Appendix A, and photograph locations are shown in Figure 2.

5.3 EXTERIOR OBSERVATIONS

The Subject Property consists of approximately 2,420 acres of land primarily used for agricultural purposes with residential and farmstead structures associated with agricultural activities that include hay production and grazing land for cattle.

5.3.1 Surface Staining and/or Stressed Vegetation

No evidence of surface staining or stressed vegetation was observed on the Subject Property during the reconnaissance.

5.3.2 Drums, Aboveground Storage Tanks, and Containers

Aboveground storage tanks (“ASTs”) with capacities estimated to be between 500 and 2,000 gallons were observed during the reconnaissance near residential and agricultural structures on the Subject Property and adjacent properties. No staining or evidence of releases of the contents was observed in relation to the ASTs. Observed ASTs are shown in Photographs 5, 6, 7, 23, 36, and 87 in Appendix A.

Two unlabeled 55-gallon drums that appeared to contain residual substances, one unlabeled 55-gallon drum that was full of an unknown substance, and several other 55-gallon drums that appeared to be disposed as waste (see subsection 5.3.3 below) were observed during the reconnaissance near residential and agricultural structures on the Subject Property (see Photographs 5, 9, 23, 30, 35, and 46 in Appendix A). One 220-gallon chemical tote that appeared to contain residual substance was observed in a hayfield on the Subject Property (see Photograph 32 in Appendix A). No staining or evidence of releases of the contents was observed in relation to the drums and tote.

Spills of fuel from ASTs and residual agricultural chemicals on the Subject Property are likely to have occurred during agricultural operations. These spills and residual agricultural chemicals are considered a *de minimis* condition because there is no evidence that indicates a threat to human health or the environment.

5.3.3 Evidence of Waste Disposal

Waste management containers of the type for temporary storage prior to routine pick-up and off-site disposal were observed near residential and agricultural structures. Observed waste management containers are shown in Photographs 2 and 80 in Appendix A. Several areas on the western and northern portions of the Subject Property were observed to have disposed waste on the ground, including drums, tires, scrap metal, debris, and dilapidated vehicles stored or abandoned. These waste materials are considered a *de minimis* condition because there is no evidence that indicates a threat to human health or the environment. Waste materials, debris, and dilapidated vehicles are shown in Photographs 5, 8, 9, 20, 22, 23, 34, 35, and 45 in Appendix A.

5.3.4 Fill Material

No fill material was observed during the reconnaissance.

5.3.5 Transformers

Pole-mounted transformers were observed along roads and near residential and agricultural structures on the Subject Property and adjacent properties during the reconnaissance. No staining or evidence of releases of transformer fluid was observed. The pole-mounted transformers are shown in Photographs 5, 23, 60, 62, 67, 69, 73 – 74, 81 – 83, and 94 in Appendix A.

5.3.6 Vents, Air Stacks, and Odors

A small vent stack associated with a historical kiln was located near an abandoned residential structure on the Subject Property on a parcel owned by Susan Dorsey Ramey. The vent stack and remaining kiln equipment are shown in Photographs 47 and 48 in Appendix A.

No other air stacks, vents, or odors were observed or detected on the Subject Property.

5.3.7 Underground Storage Tanks

No underground storage tanks were observed or detected on the Subject Property.

5.3.8 Wells

Domestic water wells, public water systems, and oil and gas wells were not observed during the site reconnaissance.

5.3.9 Septic Systems

Septic systems were not observed during the site reconnaissance.

5.3.10 Alteration in Vegetation

The Subject Property's primary land use is agriculture. Hay fields were observed to be cut with hay bales in storage areas. No other alterations in vegetation were observed on the Subject Property during the reconnaissance.

5.4 INTERIOR OBSERVATIONS

Access to interiors of residential and agricultural structures was not available during the site reconnaissance.

6.0 INTERVIEWS

6.1 SITE OWNERS

Questionnaires regarding Subject Property usage and environmental history were forwarded by Tetra Tech on behalf of AFS to landowners or representatives familiar with the Subject Property via mail, providing a self-addressed stamped envelope to facilitate return of the mailing. The list of landowners was provided by AFS due to its familiarity with both the owner (and/or associated representative) and the areas proposed for solar development. Landowner questionnaires were mailed on June 15, 2020, and 73% of the landowners responded. Interview participants were asked questions pertaining to their knowledge of current or historical conditions, events, or situations that could present a REC in the areas where the solar generation facility and associated facilities will be constructed.

According to the returned questionnaires, the primary land use within the Subject Property for the last 200 years is agricultural, including crop production of hay, soybeans, corn, tobacco, hemp, alfalfa, cattle grazing, livestock production, and dairy cows. The following information was provided by landowners pertaining to potential hazardous substances or petroleum on or adjacent to the Subject Property:

- Chemical storage was reported in the following locations, but no spills were reported associated with these chemical storage areas:

- In the barnyard of property owned by Randy and Marcylena Barker that is adjacent to the Subject Property parcel owned by them and includes five 250-gallon ASTs and one 150-gallon AST. The contents of the ASTs were not reported and
- At the parcel owned by Timothy Cropper that includes a 275-gallon diesel AST.
- Solid waste disposal areas containing brush and scrap wood were reported on the parcels owned by Brian and Julie Clark, the Brown family, and Samuel and Cibina Harris. There is no indication that hazardous substances or petroleum was disposed at these solid waste disposal areas.
- Solid waste disposal in a sinkhole was reported on the parcel owned by Mary and John Vibbert. The landowner reported the sinkhole is at the front edge of the parcel and was historically used to dispose of unburnable material. Since then, metal has been removed from the sinkhole, and more recently, only biodegradable materials have been placed in it, such as brush. Metal disposed in the sinkhole may have been a hazardous substance. Because it has been removed, it is considered an Historic REC for the Subject Property.

To date, none of the landowners interviewed indicated knowledge of conditions that would constitute a REC for the Subject Property. Copies of the completed questionnaires are provided in Appendix G. Additional landowner questionnaires received by Tetra Tech will be reviewed and forwarded to AFS in an addendum to this report.

6.2 LOCAL FIRE DEPARTMENT

Tetra Tech attempted to contact the Flemingsburg Volunteer Fire Department on June 30, 2020, for information related to potential fires, releases of hazardous substances, and/or other emergency responses at or within the vicinity of the Subject Property. To date, the Flemingsburg Volunteer Fire Department has not responded to a message requesting this information. In the event the Flemingsburg Volunteer Fire Department responds with information indicative of a REC associated with the Subject Property, Tetra Tech will issue an addendum to this report.

6.3 LOCAL HEALTH DEPARTMENT

Tetra Tech attempted to contact the Fleming County Health Department (“FCHD”) on June 30, 2020, for information related to releases of hazardous substances and/or other environmental issues in Fleming County. To date, FCHD has not responded to a message requesting this information. In the event FCHD responds with information indicative of a REC associated with the Subject Property, Tetra Tech will issue an addendum to this report.

7.0 CONCLUSIONS

Tetra Tech performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 2247-16. Any exceptions to, or deviations from, this practice are described in Section 8.0 of this report.

7.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

This assessment has revealed no evidence of RECs associated with the Subject Property.

7.2 HISTORIC RECOGNIZED ENVIRONMENTAL CONDITIONS

This assessment has revealed evidence of the following Historic RECs associated with the Subject Property:

- A location on the Subject Property on a parcel owned by Brenda Perkins next to Elizaville Road was listed in the SPILLS database and identified as “Timothy Perkins Dairy Farm”. In 2008, there was a non-permitted discharge of sewage at this location from a lagoon next to the road at the dairy farm that released into a ditch that empties into the creek, presumably Mud Lick Creek. In 2011, there was a report of “manure pit draining” from this location into a creek. The status of these incidents is listed as “Closed-Mitigated”. In 2018, there was a report of an odor emanating from the Timothy Perkins Dairy Farm that led to the discovery of many dead animals at this location. Disposal and release of animal waste at this parcel to a ditch and Mud Lick Creek may have caused soil and surface water contamination on the Subject Property that includes *E. coli*, nitrates, phosphorus, ammonia, zinc, and copper. Of these, phosphorus and ammonia are considered hazardous substances under CERCLA. Because both reported release events are listed as “Closed-Mitigated” by KDEP, soil and surface water contamination due to disposal and release of animal waste on the parcel owned by Brenda Perkins is considered an Historic REC for the Subject Property.
- Solid waste disposal in a sinkhole was reported in the landowner questionnaire on the parcel owned by Mary and John Vibbert. The landowner reported the sinkhole is at the front edge of the parcel and was historically used to dispose of unburnable material. Since then, metal has been removed from the sinkhole, and more recently, only biodegradable materials have been placed in it, such as brush. Metal disposed in the sinkhole may have been a hazardous substance under CERCLA. Because it has been removed, it is considered an Historic REC for the Subject Property.

7.3 DE MINIMIS CONDITIONS

This assessment has revealed the following *de minimis* Conditions on the Subject Property:

- Spills of fuel from ASTs and residual agricultural chemicals on the Subject Property are likely to have occurred during agricultural operations. These spills and residual agricultural chemicals are considered a *de minimis* condition because there is no evidence that indicates a threat to human health or the environment.
- Several areas on the western and northern portions of the Subject Property were observed to have waste materials including drums, tires, scrap metal, debris, and dilapidated vehicles stored or abandoned. These waste materials are considered a *de minimis* condition because there is no evidence that indicates a threat to human health or the environment.

7.4 DATA GAPS

Data gaps encountered during the performance of the Phase I ESA included the following:

- The Flemingsburg Volunteer Fire Department and FCHD did not respond to Tetra Tech's request for information regarding fires, emergency responses, hazardous substance releases, and other environmental issues.
- Access to interiors of residential and agricultural structures was not available during the site reconnaissance.

Absence of site listings for sites located on the Subject Property and within specified search distances from the Subject Property combined with site reconnaissance, historical records (aerial photographs and topographic maps) review, and landowner and occupant interviews render the data gaps experienced in conducting this Phase I ESA to be insignificant and did not hinder the ability of the environmental professional to identify RECs for the Subject Property.

8.0 DEVIATIONS

No deviations from ASTM E2247-16 were identified.

9.0 LIMITATIONS

9.1 SPECIAL TERMS AND CONDITIONS

This work was conducted in accordance with Tetra Tech's proposal dated June 5, 2020. AFS authorized Tetra Tech to conduct this work on June 8, 2020.

9.2 LIMITATIONS AND EXCEPTIONS

No Phase I ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a site. Performance of ASTM Standard Practice E2247-16 is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with the Subject Property. The information presented in this report is based on professional opinions from our field reconnaissance and visual observations of the Subject Property and vicinity, and our interpretation of the available historical information and documents reviewed, as described in this report.

It should be recognized that this study was not intended to be a definitive investigation of potential environmental concerns at the Subject Property. The scope of services for this investigation was limited and should not be construed as a guarantee that no currently unrecognized environmental concerns exist at the Subject Property. However, this study was undertaken and completed in accordance with the professional standards and generally accepted practices of environmental consultants at the time of preparation. Business environmental risk may exist on the Subject Property that is beyond the scope of this investigation.

Opinions and recommendations presented apply to the Subject Property's conditions existing at the time of our investigation and those reasonably foreseeable. They do not necessarily apply to Subject Property changes of which Tetra Tech is not aware and has not had the opportunity to evaluate.

9.3 USER RELIANCE

This report is intended for the sole use of AFS unless otherwise authorized by Tetra Tech in writing. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or the findings, conclusions, or recommendations presented is at the sole risk of said user.

10.0 REFERENCES CITED

- American Society of Testing and Materials (“ASTM”), 2016. E2247-16 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- Environmental Data Resources (“EDR”), June 10, 2020. EDR Area/Corridor Report, Inquiry Number 6088382.2s.
- June 12, 2020. EDR Historical Topo Map Report, Inquiry Number 6088382.5.
- June 12, 2020. The EDR Aerial Photo Decade Package, Inquiry Number 6088382.6.
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- Kentucky Division of Water, Water Quality Branch. “Kentucky Water Health Portal”. <https://watermaps.ky.gov/WaterHealthPortal/>. Accessed July 8, 2020.
- U.S. Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed June 24, 2020.
- U.S. Fish and Wildlife Service. National Wetlands Inventory, Wetlands Mapper. <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed June 18, 2020.

11.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

This report was prepared by Tetra Tech under the supervision of David Hermance, who also conducted the site reconnaissance. The findings, recommendations, specifications, and professional opinions presented in this report were prepared in accordance with generally accepted professional practice, and within the scope of the project. There is no other warranty, either express or implied.

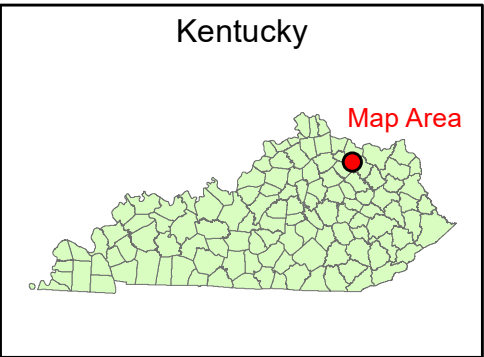
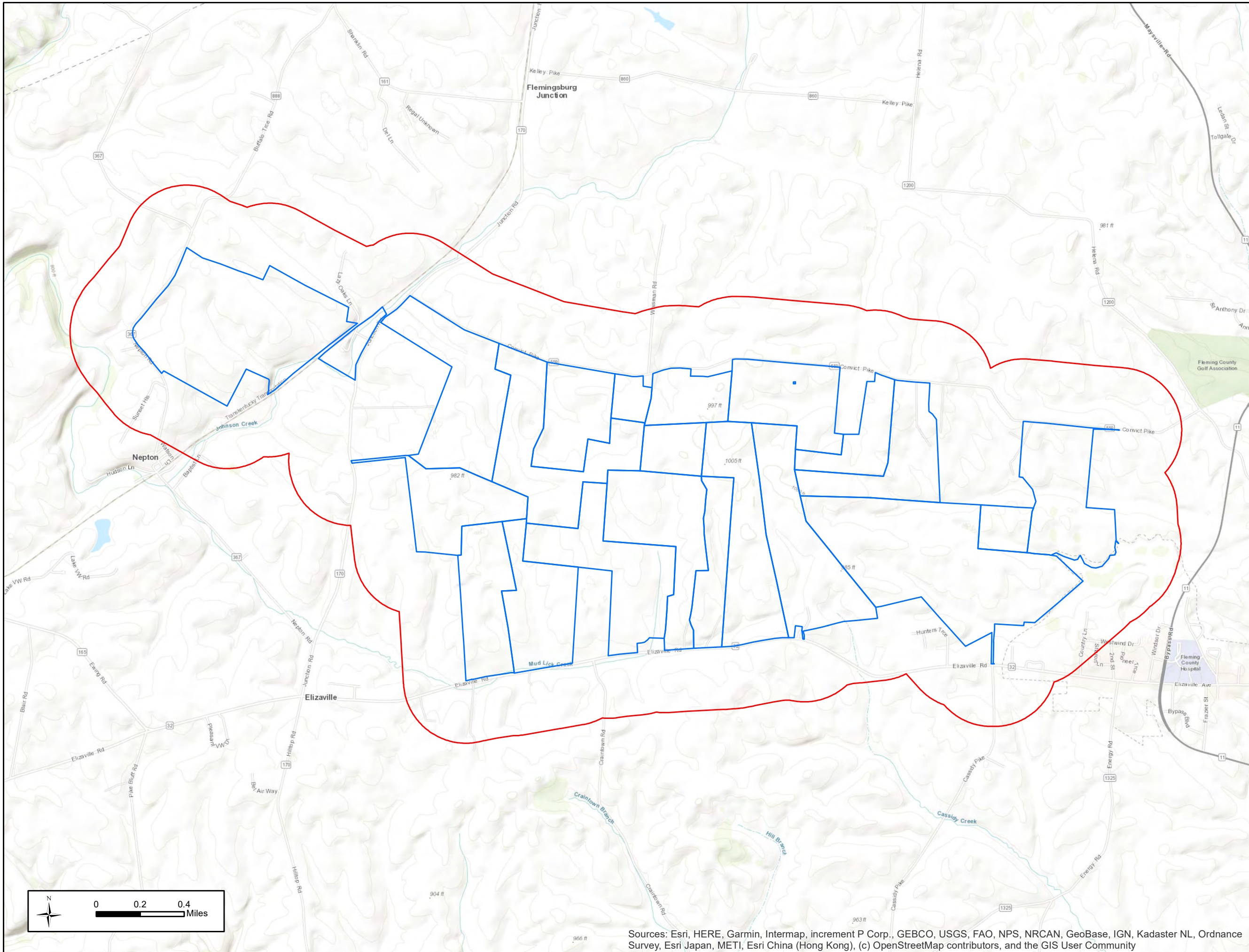
I, David Hermance, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312.10. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR 312.

- Hold a current Professional Engineer's (P.E.) or Professional Geologist's (P.G.) license or registration from a state, tribe, or U.S. territory and have the equivalent of three (3) years of full-time relevant experience.
- Be a licensed or certified by the federal government, a state tribe, or U.S. territory to perform environmental inquiries as defined in §312.21 and have the equivalent of three (3) years of full-time relevant experience.
- Have a Baccalaureate or higher degree from an accredited institution of higher education in a relevant discipline of engineering, environmental science, or earth science and the equivalent of five (5) years of full-time relevant experience.
- As of the date of promulgation of the final rule, have a Baccalaureate or higher degree from an accredited institution of higher education and the equivalent of ten (10) years of full-time relevant experience.



David R. Hermance

FIGURES



Legend

- Project Parcel Boundaries
- 1500 Foot Parcel Buffer



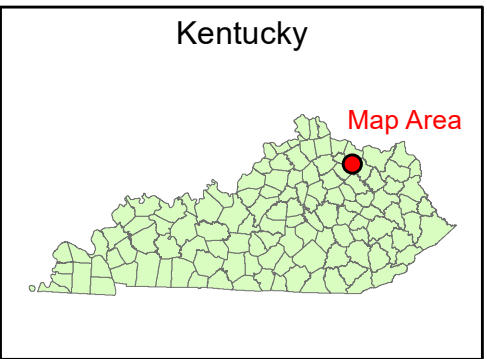
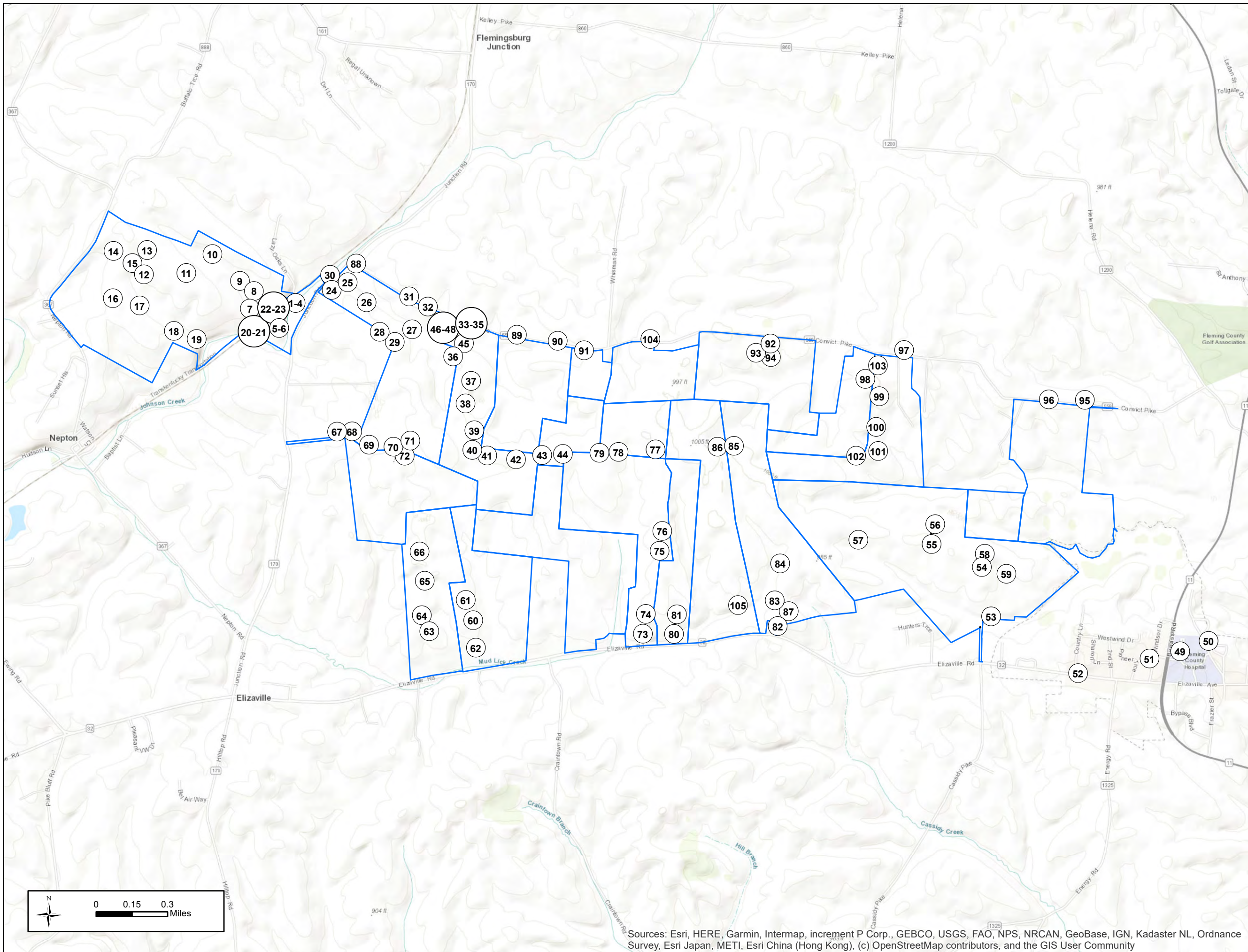
Project Vicinity

**Fleming Solar
Fleming County
Kentucky**

Figure 1
Date: 6/24/2020



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Legend

Photo Locations

Project Parcel Boundaries



Photo Log

Fleming Solar
Fleming County
Kentucky

Figure 2

Date: 6/24/2020

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

APPENDIX A. PHOTOGRAPHIC DOCUMENTATION

**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 1

Description:

View of baled hay and agricultural storage equipment on the Subject Property.

Orientation:

Facing NE.



Photo: 2

Description:

View of waste management container on Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 3

Description:

View of stream on Subject Property.

Orientation:

Facing S.



Photo: 4

Description:

View of railroad spur on railroad right-of-way.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 5

Description:

View of miscellaneous debris including drums, tires, scrap metal, concrete blocks, aboveground storage tank ("AST"), compressed gas cylinders on the Subject Property. Note also the pole-mounted transformer.

Orientation:

Facing SE.



Photo: 6

Description:

View of two ASTs for fuel dispensing.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 7

Description:

View of interior of farm structure with AST on the Subject Property.

Orientation:

Facing SW.



Photo: 8

Description:

View of dilapidated vehicles on the Subject Property.

Orientation:

Facing W.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 9

Description:

View of waste materials including a drum, box, and scrap metal on the Subject Property.

Orientation:

Facing NE.



Photo: 10

Description:

View of farm pond on the Subject Property.

Orientation:

Facing W.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 11

Description:
View of barn on the
Subject Property.

Orientation:
Facing S.



Photo: 12

Description:
View of tree line on
Subject Property.

Orientation:
Facing W.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 13

Description:

View of tree line next to hay field on the Subject Property.

Orientation:

Facing SW.



Photo: 14

Description:

View of tree line next to hay field on the Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 15

Description:

View of forested area on the Subject Property.

Orientation:

Facing S.



Photo: 16

Description:

View of cattle grazing on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 17

Description:

View of forested area on the Subject Property.

Orientation:

Facing SE.



Photo: 18

Description:

View of grazing land with forested area in the background on the Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 19

Description:

View of small stream on the Subject Property.

Orientation:

Facing S.



Photo: 20

Description:

View of dilapidated automobile in field drainage ditch on the Subject Property.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 21

Description:

View of storage tank that appears to be pumping water from a small stream on the Subject Property.

Orientation:

Facing S.



Photo: 22

Description:

View of old farm equipment and dilapidated vehicles on the Subject Property.

Orientation:

Facing E.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 23

Description:

View of miscellaneous debris including drums, tires, scrap metal, concrete blocks, AST, compressed gas cylinders on the Subject Property. Note also the pole-mounted transformer.

Orientation:

Facing SE.



Photo: 24

Description:

View of trailer containing debris along tree line on the Subject Property.

Orientation:

Facing E.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 25

Description:

View of tree line next to hay field on the Subject Property.

Orientation:

Facing SW.



Photo: 26

Description:

View of tree line along a hay field on the Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 27

Description:

View of tree line next to hay field on the Subject Property.

Orientation:

Facing W.



Photo: 28

Description:

View of small burn pit in hay field on the Subject Property.

Orientation:

Facing NE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 29

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing SW.



Photo: 30

Description:

View of barn with empty drums and other materials stored on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 31

Description:

View of hay fields/grazing land on the Subject Property..

Orientation:

Facing SW.



Photo: 32

Description:

View of chemical tote on the edge of a hayfield on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 33

Description:

View of abandoned residential structure on the Subject Property.

Orientation:

Facing W.



Photo: 34

Description:

View of abandoned vehicle near the abandoned house on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 35

Description:

View of interior of barn/storage structure with various drums, tires, scrap metal, and debris on the Subject Property.

Orientation:

Facing W.



Photo: 36

Description:

View of residential and farmstead structures including an AST on the Subject Property.

Orientation:

Facing NE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 37

Description:

View of hay field on the Subject Property.

Orientation:

Facing S.



Photo: 38

Description:

View of hay field/grazing land on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 39

Description:

View of farm pond on the Subject Property.

Orientation:

Facing SW.



Photo: 40

Description:

View of hay field/grazing land on the Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 41

Description:

View of hay field/grazing land with a farm pond on the Subject Property.

Orientation:

Facing E.



Photo: 42

Description:

View of old farm equipment on the Subject Property.

Orientation:

Facing E.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 43

Description:

View of hay field/grazing land on the Subject Property.

Orientation:

Facing N.



Photo: 44

Description:

View of hay field/grazing land on the Subject Property.

Orientation:

Facing NE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 45

Description:
View of debris on the
Subject Property.

Orientation:
Facing N.



Photo: 46

Description:
View of 55-gallon drum
full of liquid next to
abandoned house on the
Subject Property.

Orientation:
Facing E.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 47

Description:

View of vent stack on partially buried structure near abandoned house on the Subject Property.

Orientation:

Facing S.



Photo: 48

Description:

View of partially buried structure with vent stack near abandoned house on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 49

Description:

View of the Fleming County Hospital in Flemingsburg, Kentucky on adjacent property.

Orientation:

Facing E.



Photo: 50

Description:

View of the State Maintenance Garage on adjacent property.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 51

Description:

View of fuel service station on adjacent property.

Orientation:

Facing E.



Photo: 52

Description:

View of Fleming-Mason Energy on adjacent property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 53

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing NW.



Photo: 54

Description:

View of barn on the Subject Property.

Orientation:

Facing WNW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 55

Description:

View of hay fields/grazing land with electric power transmission lines on the Subject Property.

Orientation:

Facing N.



Photo: 56

Description:

View of grazing land with MET tower in background.

Orientation:

Facing W.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 57

Description:

View of farm pond and hay fields/grazing land on the Subject Property.

Orientation:

Facing SW.



Photo: 58

Description:

View of hay fields /grazing land on the Subject Property.

Orientation:

Facing SE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 59

Description:

View of farm pond on the Subject Property.

Orientation:

Facing N.



Photo: 60

Description:

View of residential structure including pole-mounted transformer on the Subject Property.

Orientation:

Facing NW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 61

Description:

View of hay fields /grazing land on the Subject Property.

Orientation:

Facing E.



Photo: 62

Description:

View of pole-mounted transformer on the Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 63

Description:

View of agricultural structure on the Subject Property.

Orientation:

Facing NW.



Photo: 64

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing NE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 65

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing NE.



Photo: 66

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing NE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 67

Description:

View of residential structure with pole-mounted transformer on the Subject Property.

Orientation:

Facing E.



Photo: 68

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing SE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 69

Description:

View of pole-mounted transformer on the Subject Property.

Orientation:

Facing SW.



Photo: 70

Description:

View of grazing land on the Subject Property.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 71

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing E.



Photo: 72

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 73

Description:

View of pole-mounted transformer on the Subject Property.

Orientation:

Facing NW.



Photo: 74

Description:

View of agricultural structure with pole-mounted transformer on the Subject Property.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 75

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing W.



Photo: 76

Description:

View of hay fields/grazing land with farm pond on the Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 77

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing N.



Photo: 78

Description:

View of hay fields/grazing land with farm pond on the Subject Property.

Orientation:

Facing NE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 79

Description:

View of tree line along hay field on the Subject Property.

Orientation:

Facing W.



Photo: 80

Description:

View of waste management container near agricultural structures on the Subject Property.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 81

Description:

View of agricultural structures with a pole-mounted transformer on the Subject Property.

Orientation:

Facing S.



Photo: 82

Description:

View of pole-mounted transformer on the Subject Property.

Orientation:

Facing NNW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 83

Description:

View of agricultural structures with pole-mounted transformers on the Subject Property.

Orientation:

Facing N.



Photo: 84

Description:

View of private road leading to hay fields/grazing land on the Subject Property.

Orientation:

Facing N.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 85

Description:

View of hay fields/grazing land with a farm pond on the Subject Property. Note Met tower in background.

Orientation:

Facing NNE.



Photo: 86

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing W.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 87

Description:

View of double-walled
AST near agricultural
structures on the Subject
Property.

Orientation:

Facing SW.



Photo: 88

Description:

View of residence on the
Subject Property.

Orientation:

Facing SW.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 89

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing .



Photo: 90

Description:

View of private road leading to residential structures and hay fields/grazing land on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 91

Description:

View of hay fields/grazing land on the Subject Property.

Orientation:

Facing S.



Photo: 92

Description:

View of MET tower on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 93

Description:

View of hay fields/grazing land near the MET tower on the Subject Property.

Orientation:

Facing SW.



Photo: 94

Description:

View of pole-mounted transformer near the MET tower on the Subject Property.

Orientation:

Facing SE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 95

Description:

View of hay fields on the Subject Property.

Orientation:

Facing S.



Photo: 96

Description:

View of hay fields on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 97

Description:

View of a farm pond on the Subject Property.

Orientation:

Facing S.



Photo: 98

Description:

View of tree lines along hay field on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 99

Description:

View of grazing land on the Subject Property.

Orientation:

Facing SE.



Photo: 100

Description:

View of farm pond on the Subject Property.

Orientation:

Facing SE.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 101

Description:

View of grazing land on the Subject Property.

Orientation:

Facing SE.



Photo: 102

Description:

View of tree line along a hayfield on the Subject Property.

Orientation:

Facing W.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 103

Description:

View of farm pond on the Subject Property.

Orientation:

Facing E.



Photo: 104

Description:

View of grazing land on the Subject Property.

Orientation:

Facing S.



**Photographic Documentation
Fleming Solar Project
15, 16 June 2020**

Photo: 105

Description:

View of residential and farmstead structures on the Subject Property.

Orientation:

Facing NW.



APPENDIX B. EDR RADIUS MAP™ REPORT WITH GEOCHECK®



Fleming Solar

Fleming Solar

Flemingsburg, KY 41041

Inquiry Number: 6088382.2s

June 10, 2020

EDR Area / Corridor Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
Executive Summary	ES1
Mapped Sites Summary	2
Key Map	2
Map Findings Summary	3
Focus Maps	7
Map Findings	35
Orphan Summary	OR-1
Government Records Searched/Data Currency Tracking	GR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

SUBJECT PROPERTY INFORMATION

ADDRESS

FLEMING SOLAR
FLEMINGSBURG, KY 41041

TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

STANDARD ENVIRONMENTAL RECORDS

State and tribal registered storage tank lists

AST: Above Ground Storage Tanks

A review of the AST list, as provided by EDR, and dated 02/19/2020 has revealed that there is 1 AST site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
VERIZON WIRELESS - N	1963 CONVICT PIKE	2 / 9	34

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

SPILLS: State spills

A review of the SPILLS list, as provided by EDR, and dated 02/10/2020 has revealed that there are 5 SPILLS sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
Not reported Facility Status: Env. Closed Inc ID: 192491		3 / 9	34
Not reported		A5 / 12	41

EXECUTIVE SUMMARY

Facility Status: Dispatched Regional Office
Inc ID: 2444478

Not reported Facility Status: Response/Investigate Inc ID: 2444457	A6 / 12	41
Not reported Facility Status: Env. Closed Inc ID: 2279186	A7 / 12	42
Not reported Facility Status: Env. Closed Inc ID: 2325993	8 / 12	43

Other Ascertainable Records

FINDS: Facility Index System/Facility Registry System

A review of the FINDS list, as provided by EDR, and dated 02/03/2020 has revealed that there is 1 FINDS site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
LAZY OAKS FARM Registry ID:: 110045268848	69 LAZY OAK LN	1 / 7	34

AIRS: Permitted Airs Facility Listing

A review of the AIRS list, as provided by EDR, and dated 02/14/2020 has revealed that there is 1 AIRS site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
VERIZON WIRELESS - F Facility Id: 2106900020	KY 559	4 / 9	35

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

SHWS: State Leads List

A review of the SHWS list, as provided by EDR, and dated 05/15/2020 has revealed that there are 3 SHWS sites within approximately 1 mile of the requested target property.

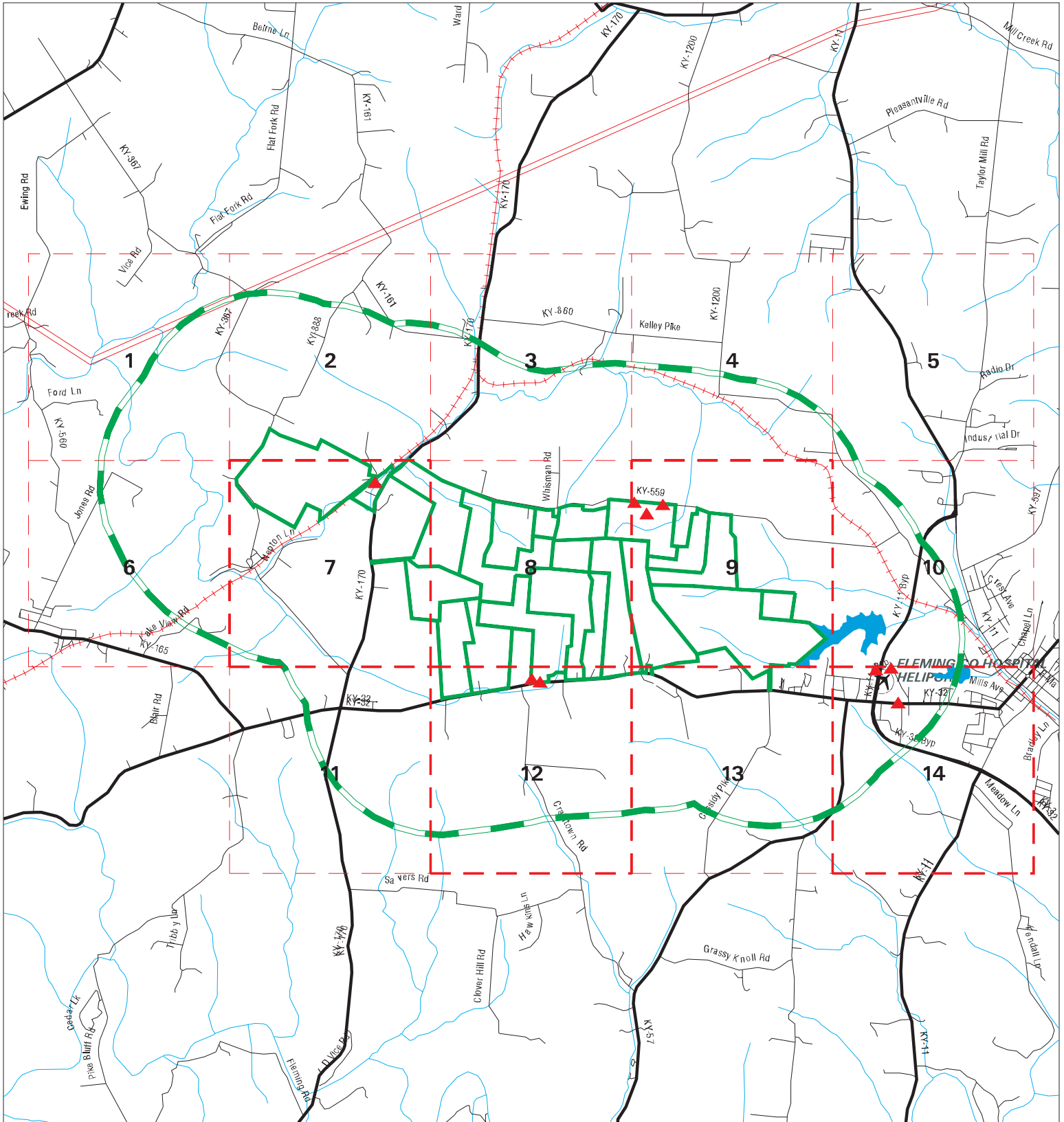
<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
FLEMING TIRE SERVICE Facility Id: 69853 Facility Status: Closed	KY 11 - BYPASS N	ESE 1/4 - 1/2 (0.431 mi.)	9 / 14	44
FLEMING COUNTY STATE Facility Id: 1123 Facility Status: Closed	ELIZAVILLE RD	ESE 1/2 - 1 (0.525 mi.)	10 / 14	44
FLEMING CO HOSPITAL Facility Id: 1119 Facility Status: Closed	920 ELIZAVILLE AVE	SE 1/2 - 1 (0.707 mi.)	11 / 14	45

MAPPED SITES SUMMARY

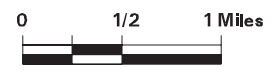
Target Property:
 FLEMING SOLAR
 FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION		
1 / 7	LAZY OAKS FARM	69 LAZY OAK LN	FINDS			TP
2 / 9	VERIZON WIRELESS - N	1963 CONVICT PIKE	AST			TP
3 / 9			SPILLS			TP
4 / 9	VERIZON WIRELESS - F	KY 559	AIRS			TP
A5 / 12			SPILLS			TP
A6 / 12			SPILLS			TP
A7 / 12			SPILLS			TP
8 / 12			SPILLS			TP
9 / 14	FLEMING TIRE SERVICE	KY 11 - BYPASS N	SHWS	2277	0.431	ESE
10 / 14	FLEMING COUNTY STATE	ELIZAVILLE RD	SHWS	2773	0.525	ESE
11 / 14	FLEMING CO HOSPITAL	920 ELIZAVILLE AVE	SHWS, UST	3734	0.707	SE

Key Map - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



<p>SITE NAME: Fleming Solar ADDRESS: Fleming Solar CITY/STATE: Flemingsburg KY ZIP: 41041</p>	<p>CLIENT: Tetra Tech MM CONTACT: David Hermance INQUIRY #: 6088382.2s DATE: 06/10/20 4:57 PM</p>
--	--

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
SHWS	1.000		0	0	1	2	NR	3
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
PSTEAF	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
SB193	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		0	0	NR	NR	NR	0
AST	0.250	1	0	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP	5	NR	NR	NR	NR	NR	5
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP	1	NR	NR	NR	NR	NR	1
ASBESTOS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS	TP		NR	NR	NR	NR	NR	0
---------	----	--	----	----	----	----	----	---

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
RGA LF	TP		NR	NR	NR	NR	NR	0
- Totals --		8	0	0	1	2	0	11

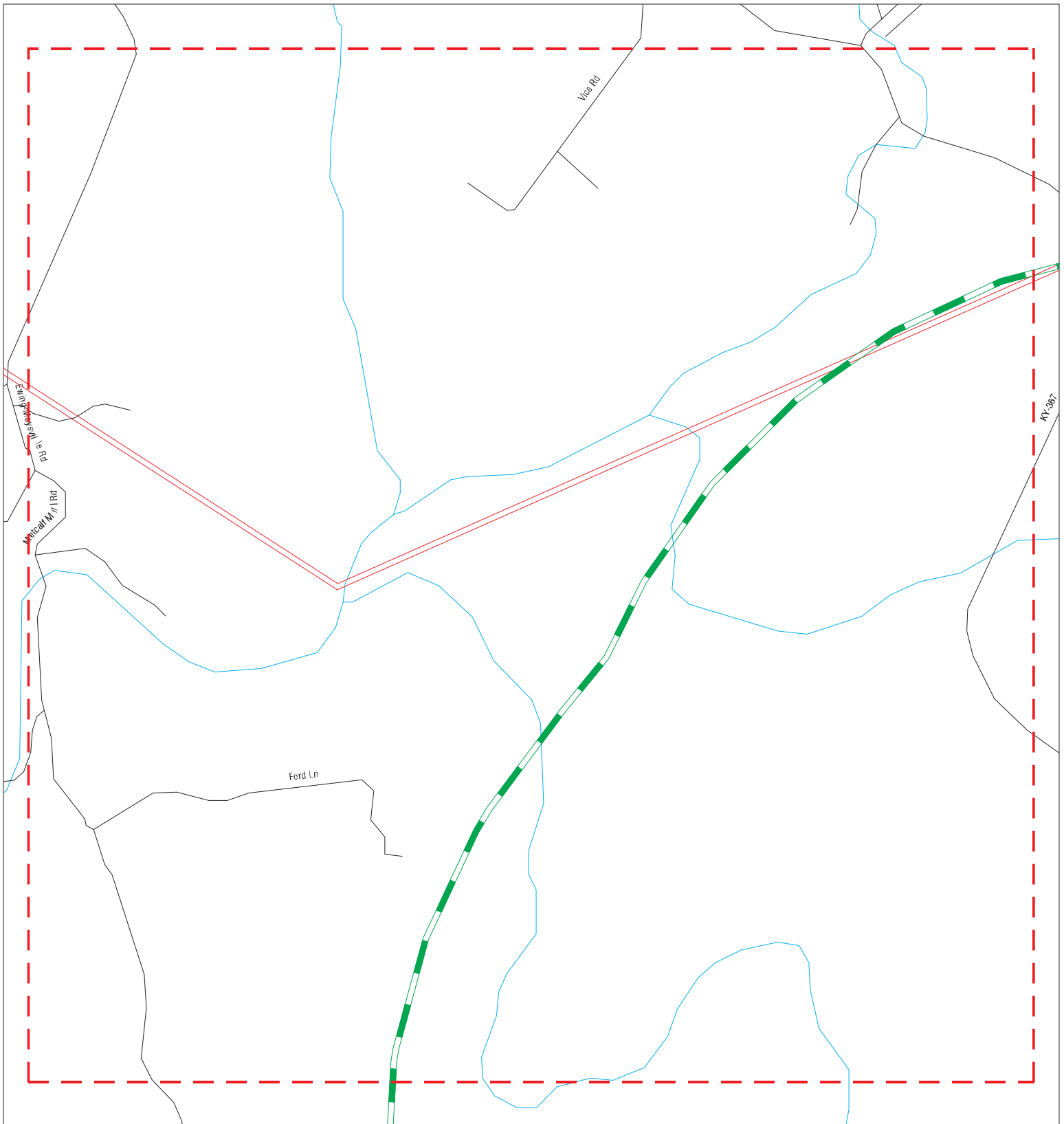
NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Focus Map - 1 - 6088382.2s



- ▲ Sites
- ↗ Focus Map - Sites
- ↗ Target Property
- ↗ Search Buffer
- ↗ Focus Map - No Sites
- ▨ National Priority List Sites
- ▨ Dept. Defense Sites
- ▨ Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

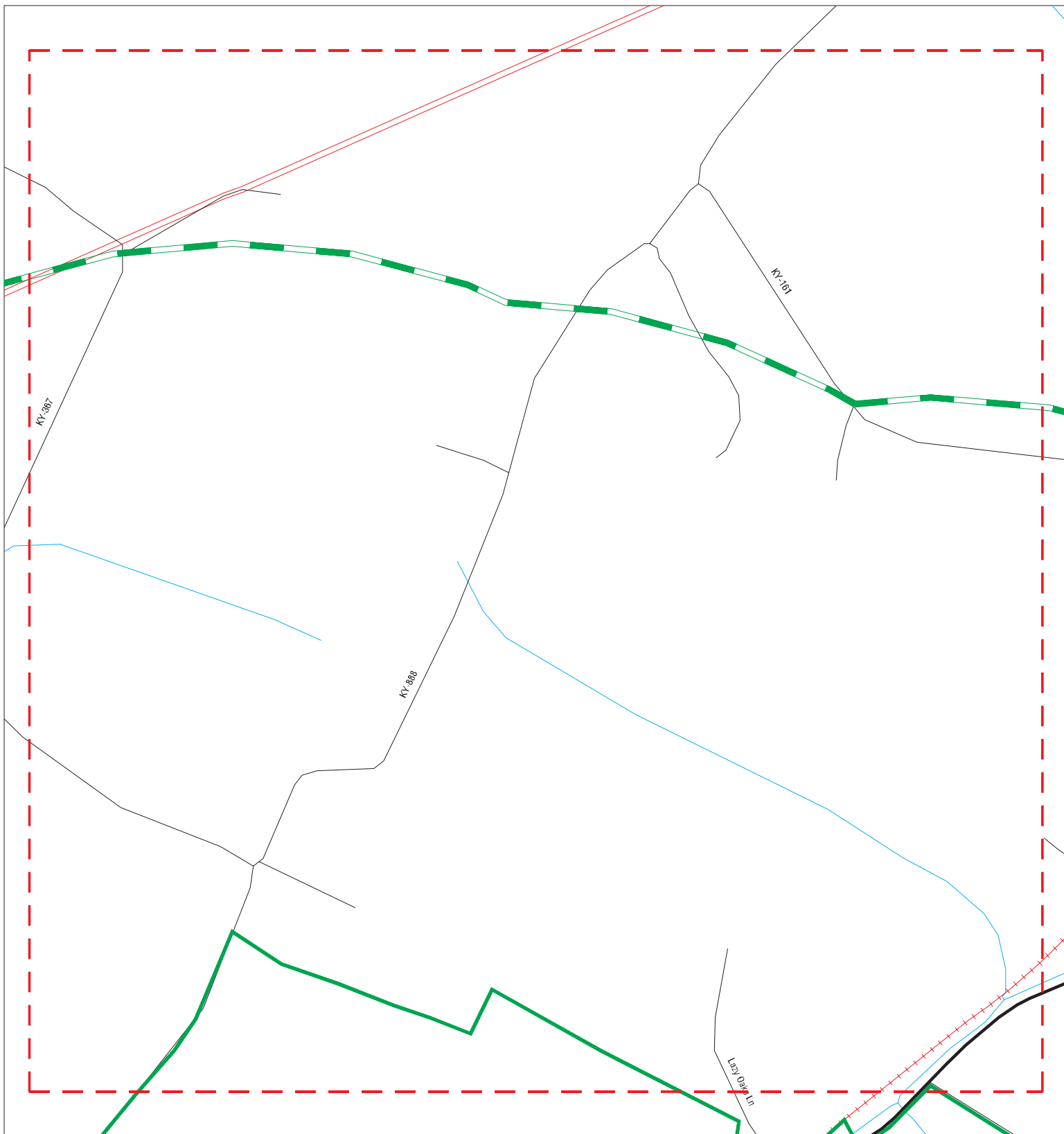
MAPPED SITES SUMMARY - FOCUS MAP 1

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

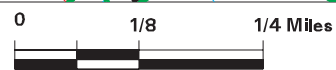
MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 2 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

MAPPED SITES SUMMARY - FOCUS MAP 2

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 3 - 6088382.2s



- ▲ Sites
- - - Target Property
- Search Buffer
- - - Focus Map - No Sites
- - - Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

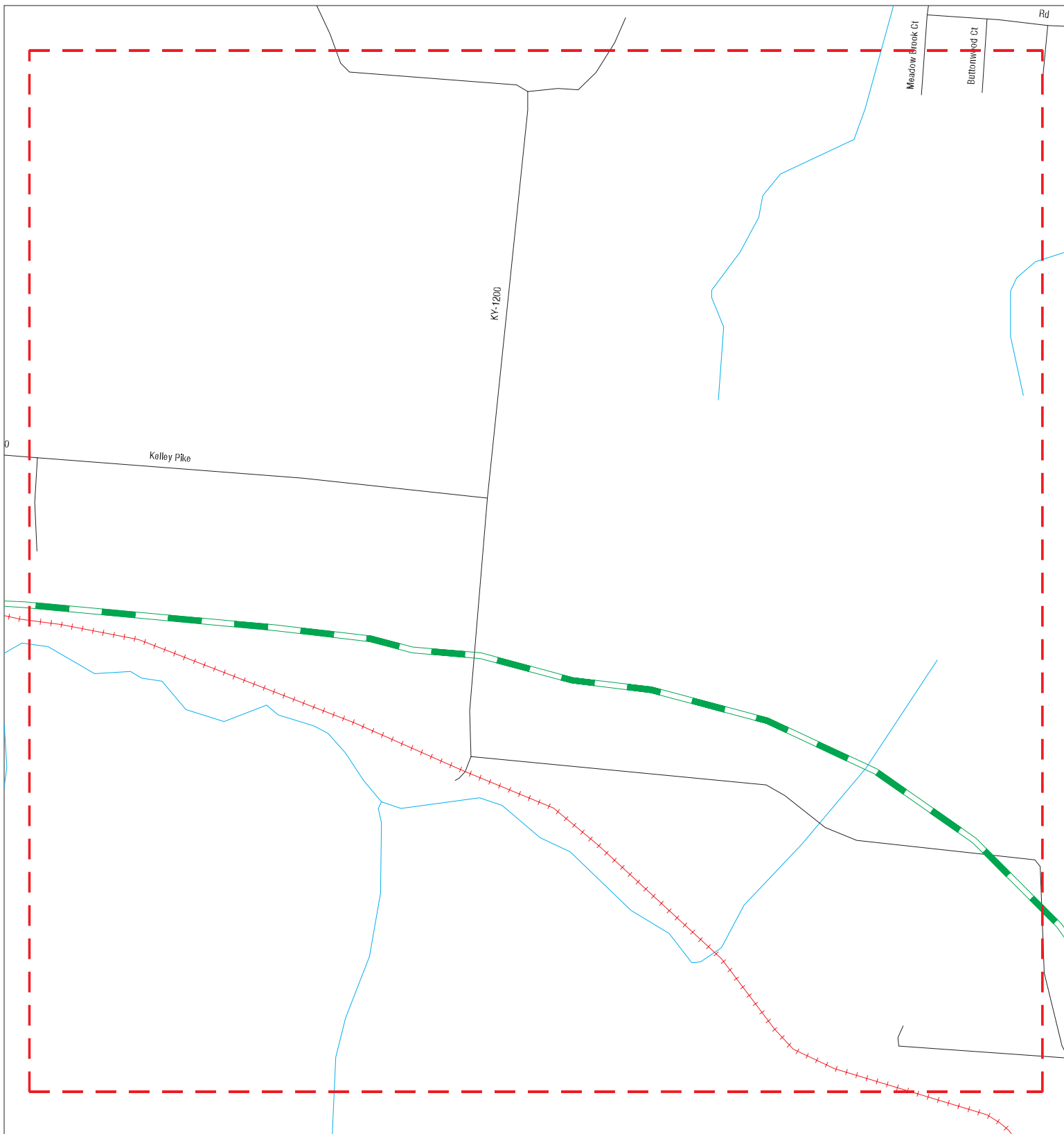
MAPPED SITES SUMMARY - FOCUS MAP 3

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 4 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

MAPPED SITES SUMMARY - FOCUS MAP 4

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 5 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

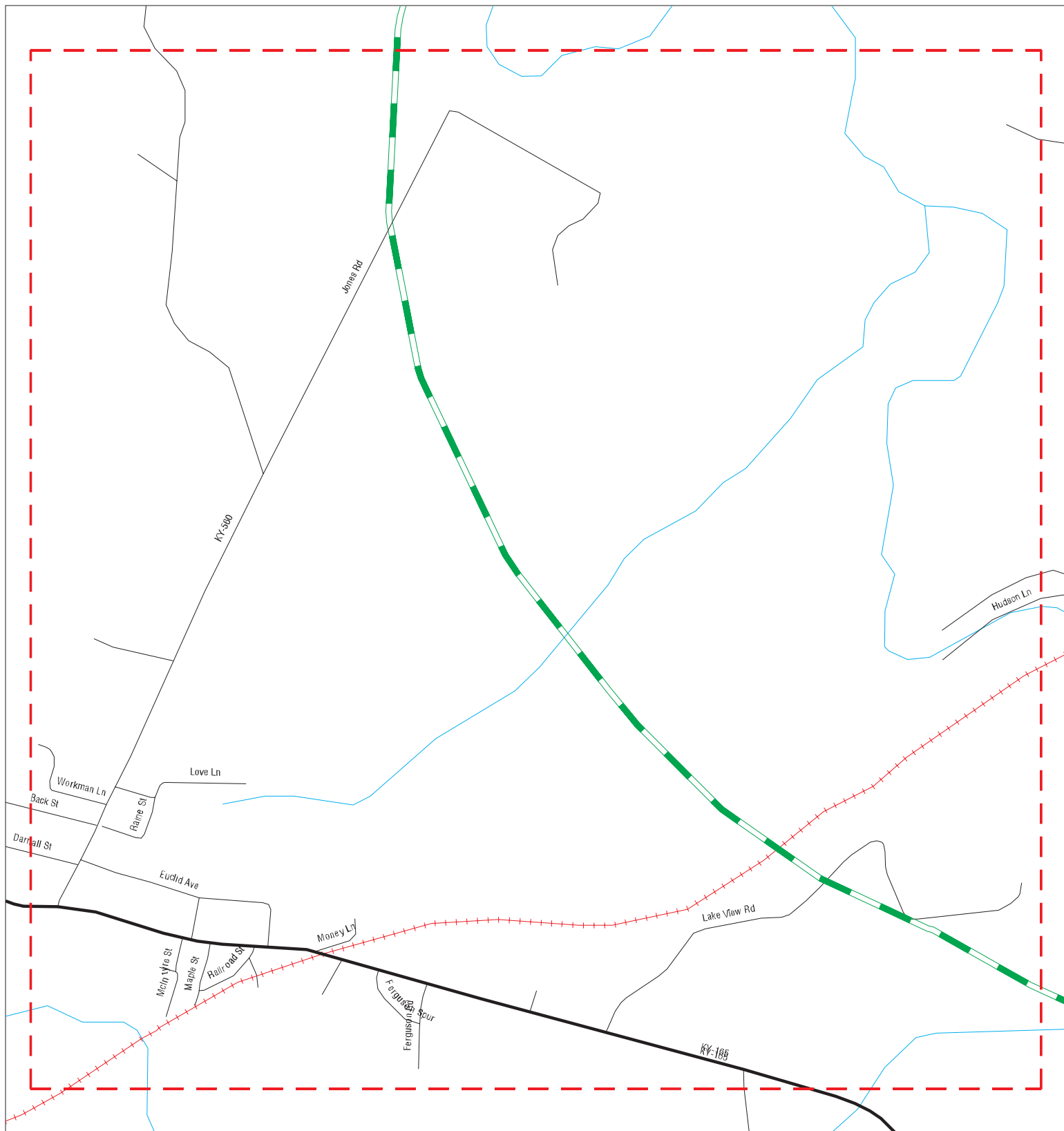
MAPPED SITES SUMMARY - FOCUS MAP 5

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 6 - 6088382.2s



- ▲ Sites
- - - Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- - - Focus Map - Sites
- - - National Priority List Sites
- - - Dept. Defense Sites
- - - Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

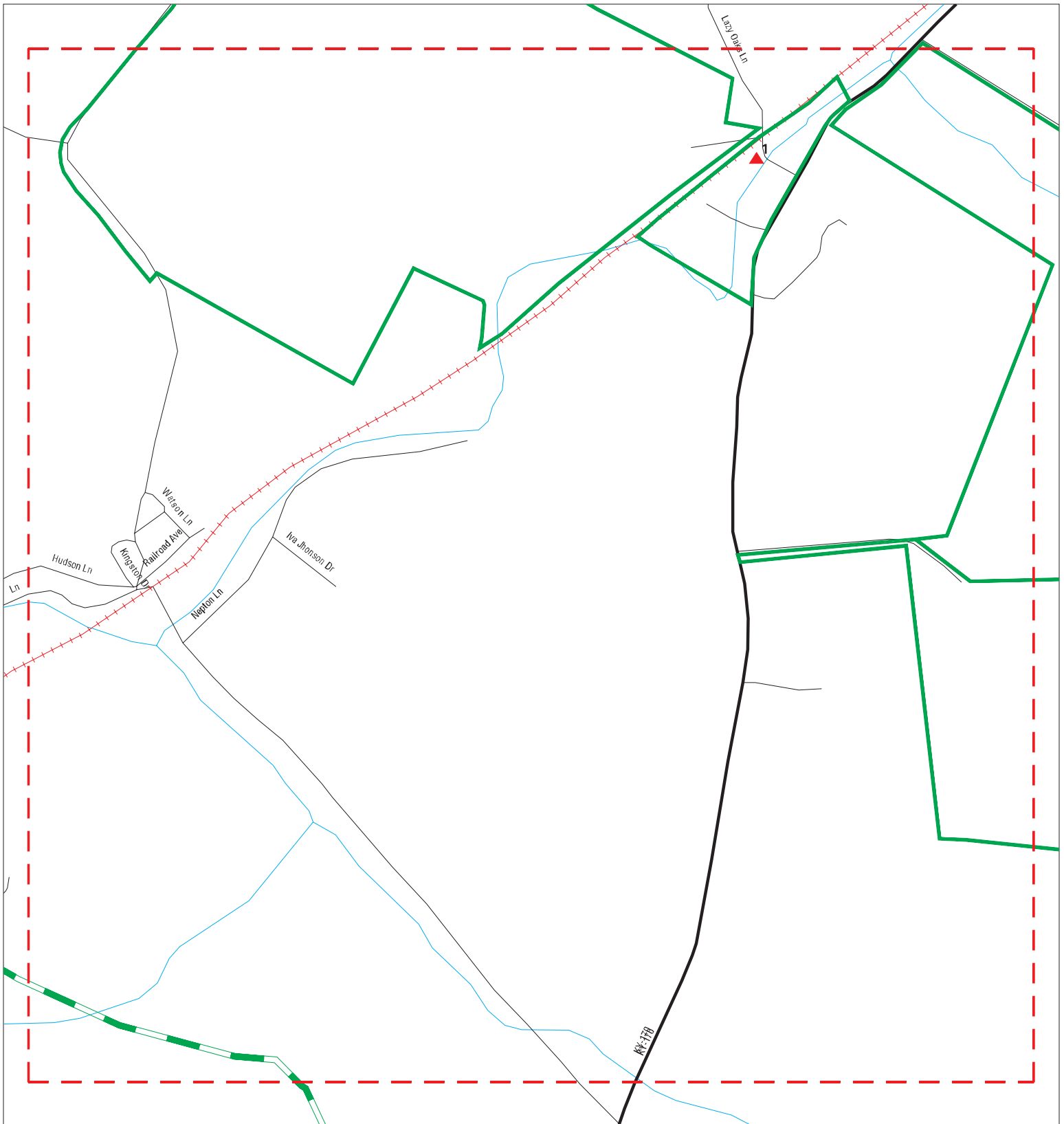
MAPPED SITES SUMMARY - FOCUS MAP 6

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 7 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



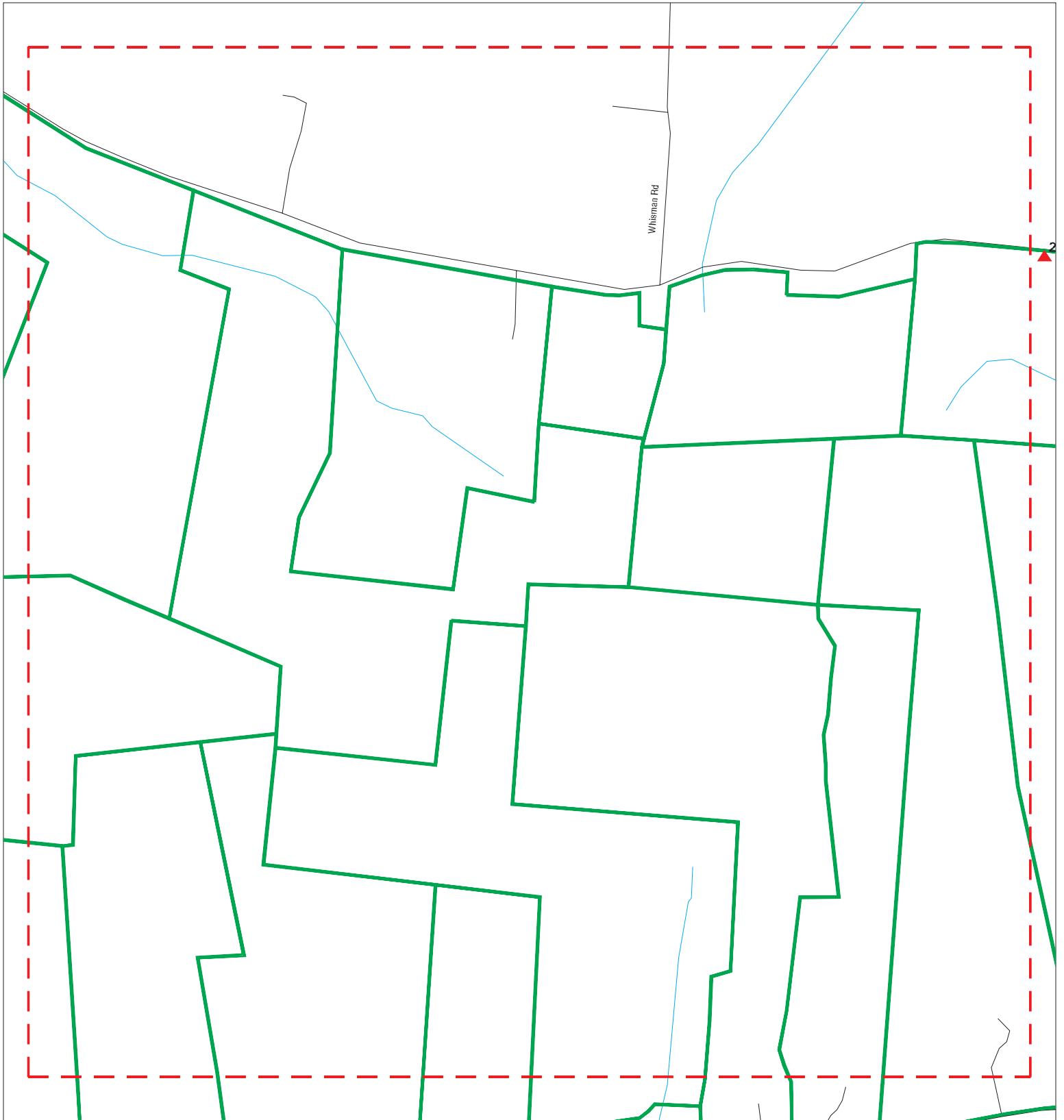
<p>SITE NAME: Fleming Solar ADDRESS: Fleming Solar CITY/STATE: Flemingsburg KY ZIP: 41041</p>	<p>CLIENT: Tetra Tech MM CONTACT: David Hermance INQUIRY #: 6088382.2s DATE: 06/10/20</p>
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MAPPED SITES SUMMARY - FOCUS MAP 7

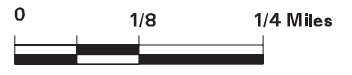
Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 7	LAZY OAKS FARM	69 LAZY OAK LN	FINDS	TP

Focus Map - 8 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Focus Map - No Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

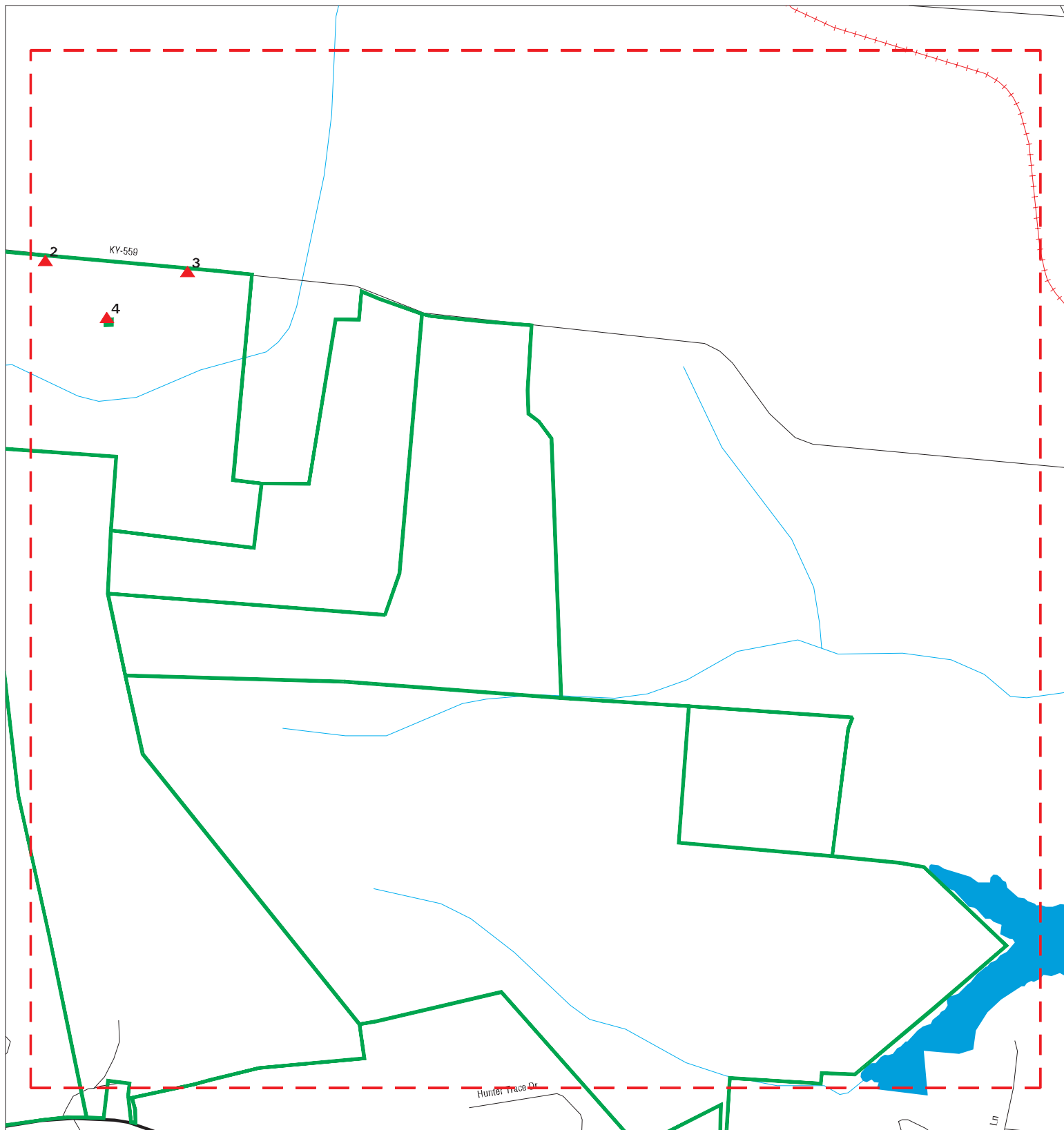
MAPPED SITES SUMMARY - FOCUS MAP 8

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

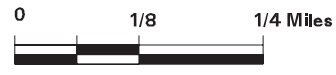
MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 9 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Focus Map - No Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
 ADDRESS: Fleming Solar
 CITY/STATE: Flemingsburg KY
 ZIP: 41041

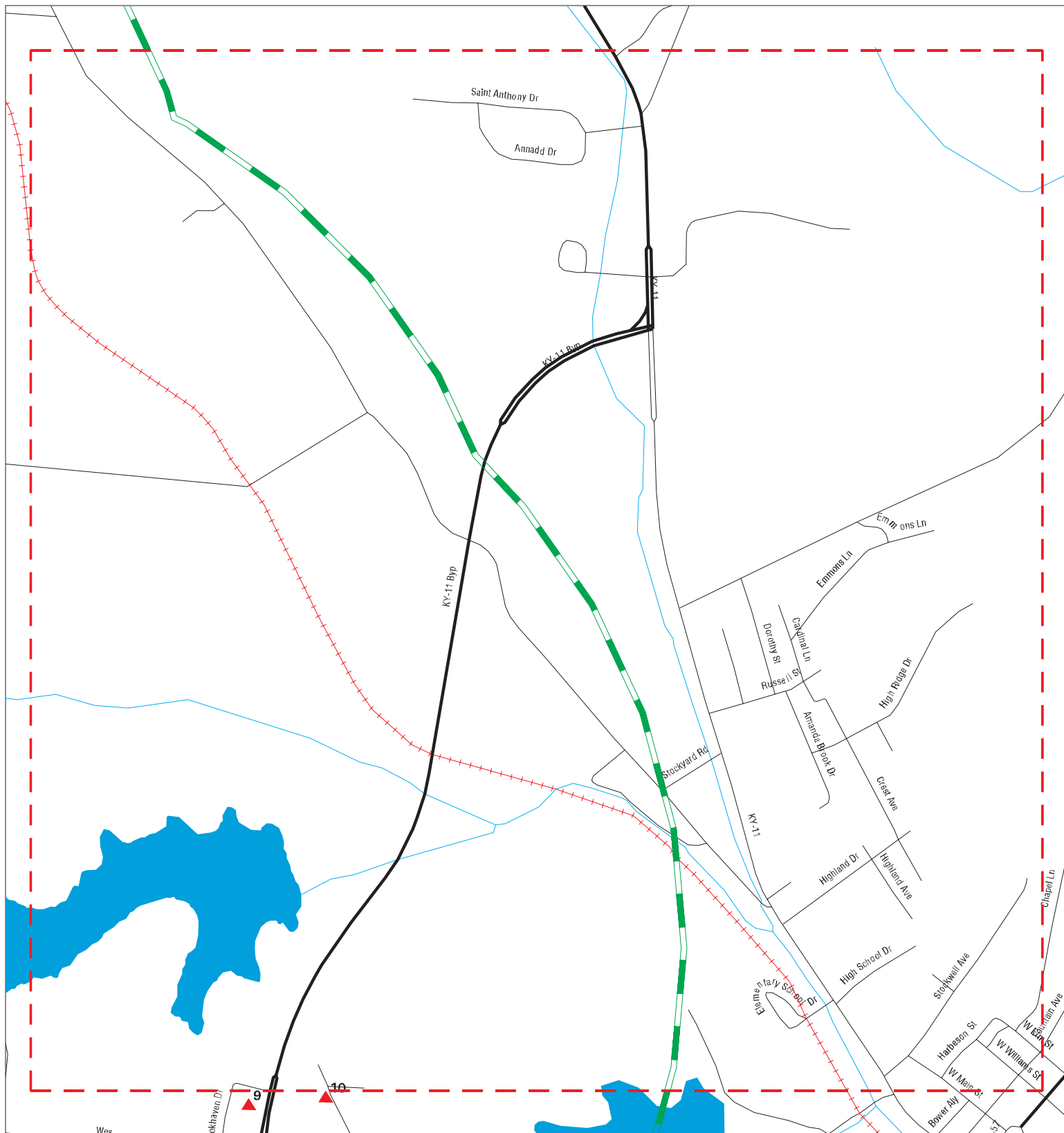
CLIENT: Tetra Tech MM
 CONTACT: David Hermance
 INQUIRY #: 6088382.2s
 DATE: 06/10/20

MAPPED SITES SUMMARY - FOCUS MAP 9

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
2 / 9	VERIZON WIRELESS - N	1963 CONVICT PIKE	AST	TP
3 / 9			SPILLS	TP
4 / 9	VERIZON WIRELESS - F	KY 559	AIRS	TP

Focus Map - 10 - 6088382.2s



- ▲ Sites
- - - Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- - - Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
 ADDRESS: Fleming Solar
 CITY/STATE: Flemingsburg KY
 ZIP: 41041

CLIENT: Tetra Tech MM
 CONTACT: David Hermance
 INQUIRY #: 6088382.2s
 DATE: 06/10/20

MAPPED SITES SUMMARY - FOCUS MAP 10

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 11 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar ADDRESS: Fleming Solar CITY/STATE: Flemingsburg KY ZIP: 41041	CLIENT: Tetra Tech MM CONTACT: David Hermance INQUIRY #: 6088382.2s DATE: 06/10/20
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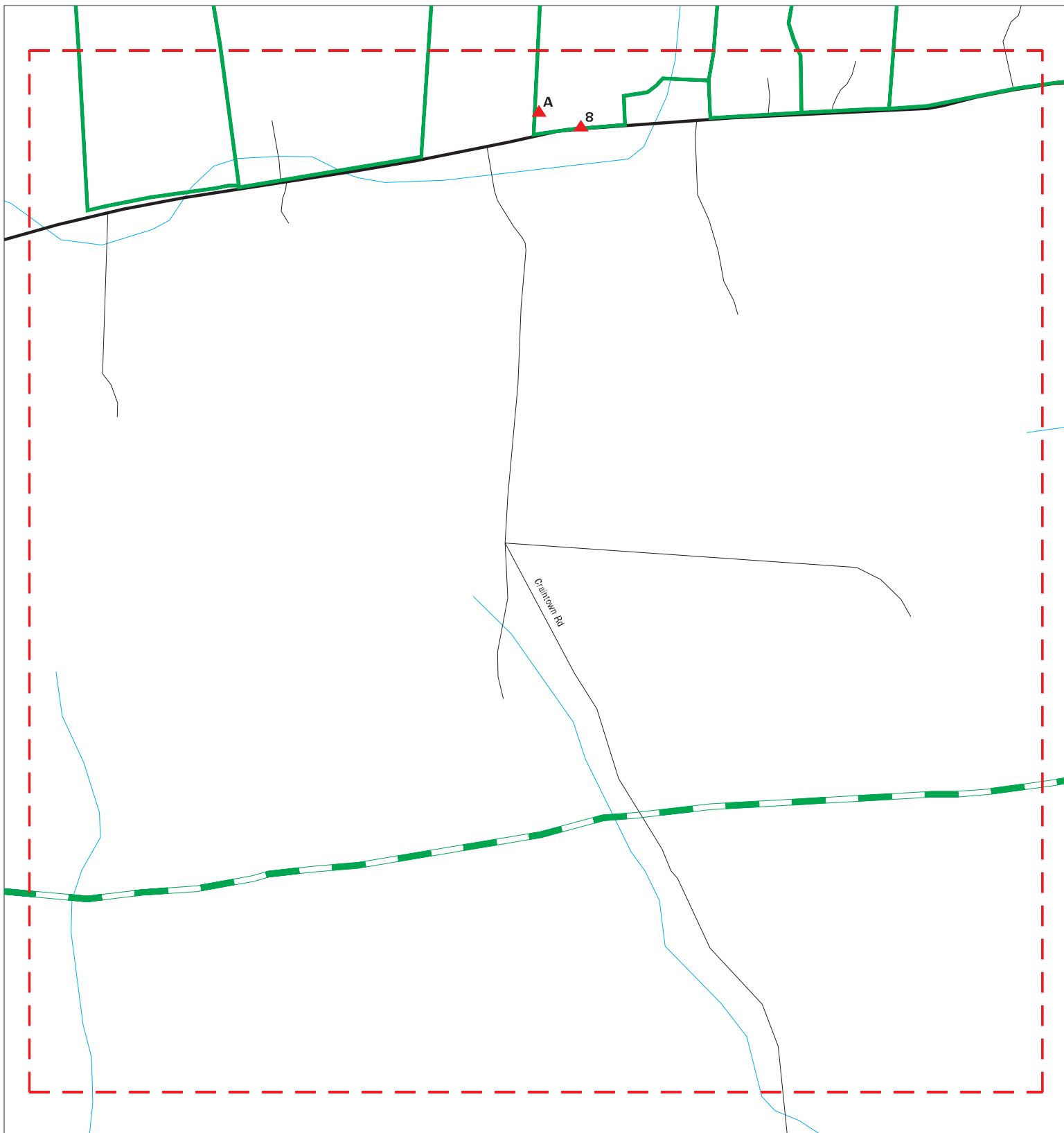
MAPPED SITES SUMMARY - FOCUS MAP 11

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

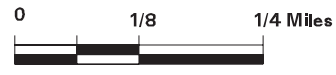
MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 12 - 6088382.2s



- ▲ Sites
- ▬▬▬ Target Property
- - - - - Search Buffer
- ▬▬▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- ▬▬▬ Focus Map - No Sites
- Indian Reservations BIA



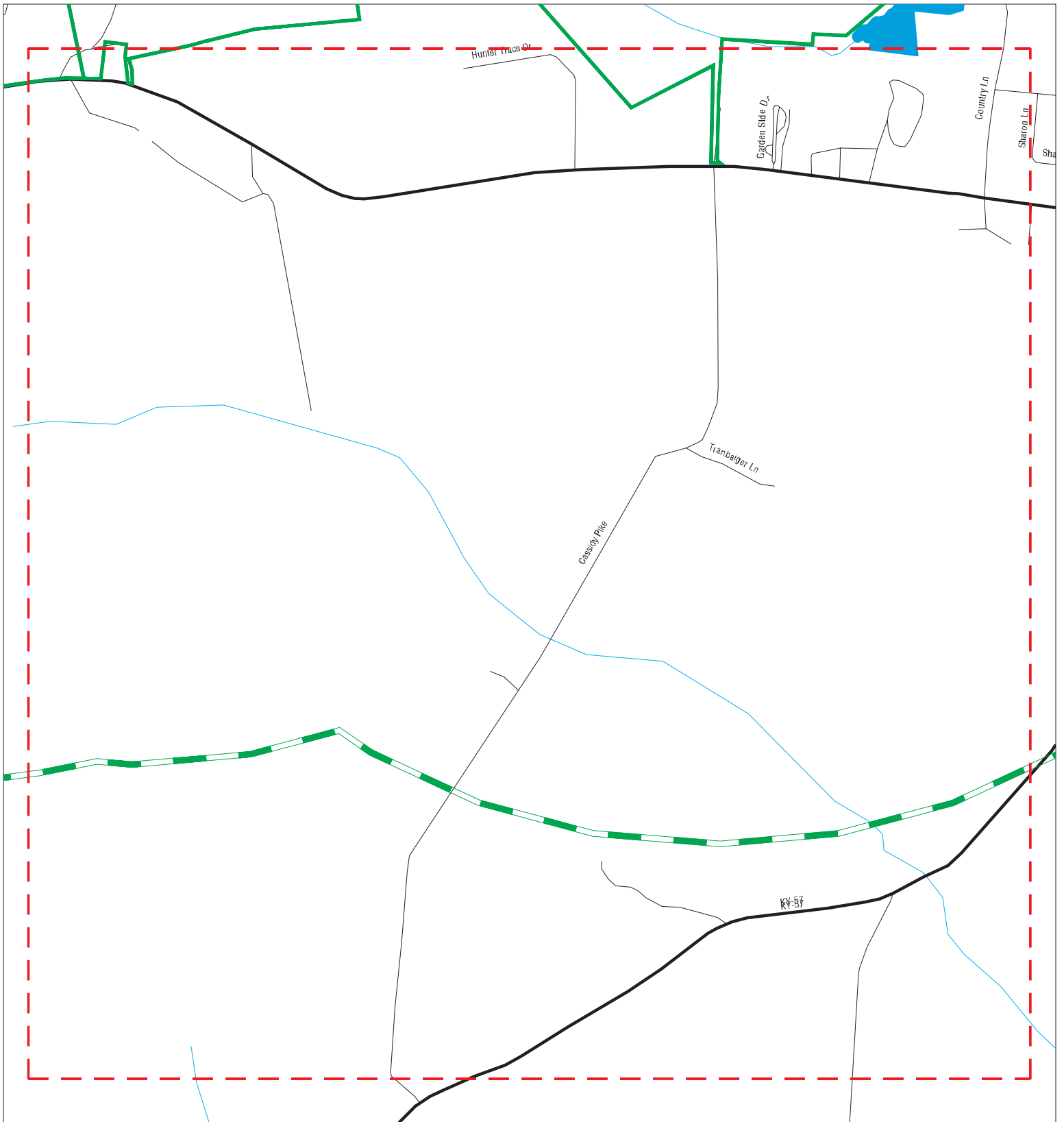
SITE NAME: Fleming Solar ADDRESS: Fleming Solar CITY/STATE: Flemingsburg KY ZIP: 41041	CLIENT: Tetra Tech MM CONTACT: David Hermance INQUIRY #: 6088382.2s DATE: 06/10/20
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MAPPED SITES SUMMARY - FOCUS MAP 12

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
A5 / 12			SPILLS	TP
A6 / 12			SPILLS	TP
A7 / 12			SPILLS	TP
8 / 12			SPILLS	TP

Focus Map - 13 - 6088382.2s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
ZIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

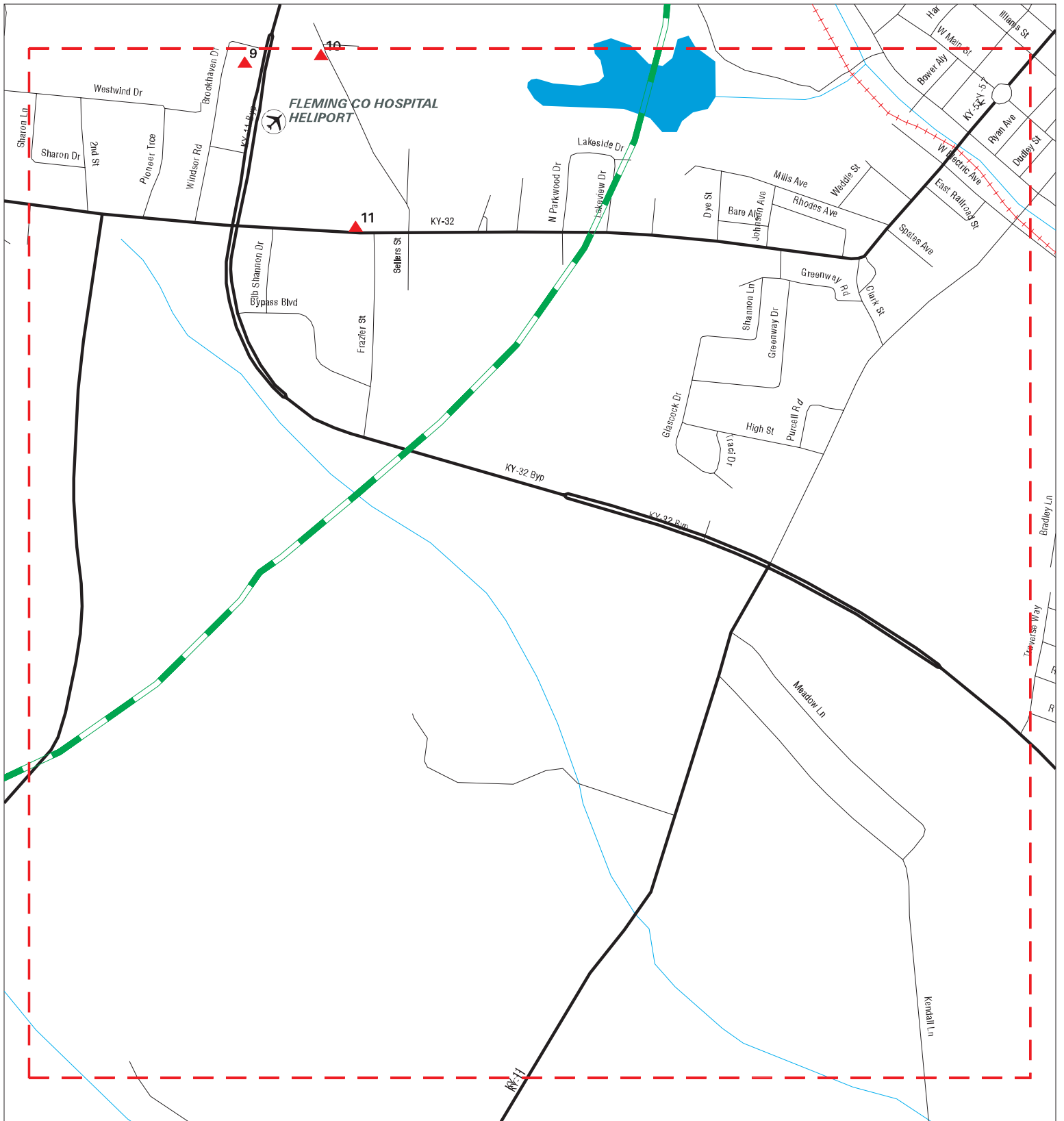
MAPPED SITES SUMMARY - FOCUS MAP 13

Target Property:
FLEMING SOLAR
FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND

Focus Map - 14 - 6088382.2s



- ▲ Sites
- - - Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Fleming Solar
ADDRESS: Fleming Solar
CITY/STATE: Flemingsburg KY
CIP: 41041

CLIENT: Tetra Tech MM
CONTACT: David Hermance
INQUIRY #: 6088382.2s
DATE: 06/10/20

MAPPED SITES SUMMARY - FOCUS MAP 14

Target Property:
 FLEMING SOLAR
 FLEMINGSBURG, KY 41041

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
9 / 14	FLEMING TIRE SERVICE	KY 11 - BYPASS N	SHWS	2277 0.431 ESE
10 / 14	FLEMING COUNTY STATE	ELIZAVILLE RD	SHWS	2773 0.525 ESE
11 / 14	FLEMING CO HOSPITAL	920 ELIZAVILLE AVE	SHWS, UST	3734 0.707 SE

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

1 **LAZY OAKS FARM**
Target **69 LAZY OAK LN**
Property **FLEMINGSBURG, KY 41041**

FINDS **1015892227**
 N/A

Actual: **848 ft.**
Focus Map: **7**
 FINDS:
 Registry ID: 110045268848
 Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110045268848

Environmental Interest/Information System:
 STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

2 **VERIZON WIRELESS - NETWORK OPERATIONS (MAIN) - AMY**
Target **1963 CONVICT PIKE**
Property **FLEMINGSBURG, KY 41111**

AST **A100450648**
 N/A

Actual: **982 ft.**
Focus Map: **9**
 AST:
 Permit Number: PAG0003931
 Name: VERIZON WIRELESS - NETWORK OPERATIONS (MAIN) - AMY HARPER
 Address: 1963 CONVICT PIKE
 City,State,Zip: FLEMINGSBURG, KY 41111
 Permit Type: Private Use
 Category: Other
 Permit Status: Completed
 Issue Date: 11/10/2010
 Subdivision: Not reported
 Last Inspection: Not reported
 Installer: Integrity Management - Bill Von Ohlen

3
Target
Property **FLEMINGSBURG, KY**

SPILLS **S117087761**
 N/A

Actual: **965 ft.**
Focus Map: **9**
 SPILLS:
 Name: Not reported
 Address: Not reported
 City,State,Zip: FLEMINGSBURG, KY
 Facility Status: Env. Closed
 Incident Type: AIR RELEASE, OTHER
 Program Code: 01
 Received By Staff: Little, Michael
 Received Date: 03/21/2005
 Report Date: 2005-03-21 07:45:00
 Dispatch Description: Odor from the Timothy Perkin's Dairy Farm is bad. Catch pond for dairy barn manure is causing bad odor especially in the early mornings. Pond is directly across from the complainants house.
 Source Name: Timothy Perkins Dairy Farm
 Source Address: Lagoon is across from house @ 1831 Convict Pike (KY 559) SOUTH of Flemingsburg, KY. Approximately 1 mi. off of bypass.
 Substances: Not reported
 Other Substances Desc: ODOR
 Media Impacted: Air
 Inc ID: 192491
 Lead Invest Person ID: 9646
 Compliance: Yes
 Notification: No
 Priority: Routine

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S117087761

Incident End Date: 2005-03-21 00:00:00
Follow Up Priority Desc: Not reported
Most Recent Comp Eval Activity: Not reported
Most Recent ENF Activity: Not reported
Begin Emergency Date: Not reported
End Emergency Date: Not reported
MARS Function Code: Not reported
Locked: Yes
Closure Type Desc: Env. Closed-No Action Necessary
Latitude: 83.78211
Longitude: -38.44116

4 VERIZON WIRELESS - FLEMINGSBURG
Target KY 559
Property FLEMINGSBURG, KY 41041

AIRS S111834963
N/A

Actual:
978 ft.

Focus Map:
9

AIRS:

Name: VERIZON WIRELESS - FLEMINGSBURG
Address: KY 559
City,State,Zip: FLEMINGSBURG, KY 41041
Facility: 2106900020
Mailing Address 3: Not reported
Emps: 1
Plant Class Description: R; Registered Source
Acreage: 1.00
Alternate Facility Name: Verizon Wireless - Flemingsburg
Alternate Facility End Date: Not reported
Principal Product: Communications
State Plant Class Code: R000
DAQ AI Type: INFO-Telecommunications (517)
DAQ Reg Comment: Not reported
Mailing Address Line 2: Not reported
Inspector Assigned AI: Not reported
Last Inspection Lead: Jonathan Barker
Last Inspection Date: 02/19/2013
Air Programs: 0-SIP Source; 9-NSPS; M-MACT
Air Subparts: Not Applicable; 9-IIII-Compression Ignition Int. Comb Eng;
M-ZZZZ-Recipro. Int. Comb Engine (RICE)

Emission:

Year: 2017
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: Acetaldehyde
Actual Emissions: 0

Year: 2017
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: Benzene
Actual Emissions: 0

Year: 2017
County: Fleming

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS - FLEMINGSBURG (Continued)

S111834963

Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	Carbon Dioxide
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	CO (Carbon Monoxide)
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	Formaldehyde
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	Nitrogen Oxides
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PM10 (Particulate Matter - 10 Microns Or Less)
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PM2.5 (Particulate Matter - 2.5 Microns Or Less)
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PT (Particulate Matter)
Actual Emissions:	0
Year:	2017
County:	Fleming
Facility ID:	2106900020

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS - FLEMINGSBURG (Continued)

S111834963

Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: SO2 (Sulfur Dioxide)
Actual Emissions: 0

Year: 2017
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: Toluene
Actual Emissions: 0

Year: 2017
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: VOC (Volatile Organic Compounds)
Actual Emissions: 0

Year: 2017
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: Xylenes (Total)
Actual Emissions: 0

Year: 2016
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: CO (Carbon Monoxide)
Actual Emissions: 0

Year: 2016
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)
Actual Emissions: 0

Year: 2016
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg
AI ID: 115276
Pollutant: PT (Particulate Matter)
Actual Emissions: 0

Year: 2016
County: Fleming
Facility ID: 2106900020
Facility Name: Verizon Wireless - Flemingsburg

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS - FLEMINGSBURG (Continued)

S111834963

AI ID:	115276
Pollutant:	SO2 (Sulfur Dioxide)
Actual Emissions:	0
Year:	2016
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	VOC (Volatile Organic Compounds)
Actual Emissions:	0
Year:	2012
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	CO (Carbon Monoxide)
Actual Emissions:	0
Year:	2012
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PM10 (Particulate Matter - 10 Microns Or Less)
Actual Emissions:	0
Year:	2012
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PT (Particulate Matter)
Actual Emissions:	0
Year:	2012
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	SO2 (Sulfur Dioxide)
Actual Emissions:	0
Year:	2012
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	VOC (Volatile Organic Compounds)
Actual Emissions:	0
Year:	2013
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS - FLEMINGSBURG (Continued)

S111834963

Pollutant:	CO (Carbon Monoxide)
Actual Emissions:	0
Year:	2013
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PM10 (Particulate Matter - 10 Microns Or Less)
Actual Emissions:	0
Year:	2013
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PT (Particulate Matter)
Actual Emissions:	0
Year:	2013
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	SO2 (Sulfur Dioxide)
Actual Emissions:	0
Year:	2013
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	VOC (Volatile Organic Compounds)
Actual Emissions:	0
Year:	2014
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	CO (Carbon Monoxide)
Actual Emissions:	0
Year:	2014
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PM10 (Particulate Matter - 10 Microns Or Less)
Actual Emissions:	0
Year:	2014
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PT (Particulate Matter)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS - FLEMINGSBURG (Continued)

S111834963

Actual Emissions:	0
Year:	2014
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	SO2 (Sulfur Dioxide)
Actual Emissions:	0
Year:	2014
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	VOC (Volatile Organic Compounds)
Actual Emissions:	0
Year:	2015
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	CO (Carbon Monoxide)
Actual Emissions:	0
Year:	2015
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PM10 (Particulate Matter - 10 Microns Or Less)
Actual Emissions:	0
Year:	2015
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	PT (Particulate Matter)
Actual Emissions:	0
Year:	2015
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	SO2 (Sulfur Dioxide)
Actual Emissions:	0
Year:	2015
County:	Fleming
Facility ID:	2106900020
Facility Name:	Verizon Wireless - Flemingsburg
AI ID:	115276
Pollutant:	VOC (Volatile Organic Compounds)
Actual Emissions:	0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)
EDR ID Number
EPA ID Number

A5
Target
Property **EWING, KY**

SPILLS **S125870789**
N/A

Site 1 of 3 in cluster A

Actual: **SPILLS:**
912 ft. Name: Not reported
Focus Map: Address: Not reported
12 City,State,Zip: EWING, KY
 Facility Status: Dispatched Regional Office
 Incident Type: ODOR
 Program Code: 01
 Received By Staff: Patton, Jeff
 Received Date: 09/13/2018
 Report Date: 2018-09-13 08:10:07
 Dispatch Description: Caller reports a horrible stench that smells of manure and dead animals coming from the nearby dairy farm for the past three weeks. Caller asked the owners if they were doing something different on the farm to cause the odor and the response was "making money". Caller says you cannot even go outside anymore and the odor is making her physically sick. Related Incident: 2444457

 Source Name: Timothy Perkins Dairy Farm (AI ID: 101423)
 Source Address: Elizaville Road
 Substances: Not reported
 Other Substances Desc: Not reported
 Media Impacted: Air
 Inc ID: 2444478
 Lead Invest Person ID: 45518
 Compliance: Yes
 Notification: No
 Priority: Routine
 Incident End Date: Not reported
 Follow Up Priority Desc: Not reported
 Most Recent Comp Eval Activity: AI: 101423 CIN20180002
 Most Recent ENF Activity: Not reported
 Begin Emergency Date: Not reported
 End Emergency Date: Not reported
 MARS Function Code: Not reported
 Locked: No
 Closure Type Desc: Not reported
 Latitude: 38.42264
 Longitude: -83.79980

A6
Target
Property **EWING, KY**

SPILLS **S125870772**
N/A

Site 2 of 3 in cluster A

Actual: **SPILLS:**
912 ft. Name: Not reported
Focus Map: Address: Not reported
12 City,State,Zip: EWING, KY
 Facility Status: Response/Investigate
 Incident Type: ODOR; NPS-AWQA
 Program Code: 04
 Received By Staff: Not reported
 Received Date: 09/12/2018
 Report Date: 2018-09-12 09:54:00

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S125870772

Dispatch Description: Complainant Reports: For the past 2 weeks (and mind you before all the rainfall), the farm, located on Elizaville Rd, Ewing Ky....has been a horrible smell (air quality issue) & also I know that he is affecting the water quality also because of the nastiness in the ditch lines along his property. Complaint received on 9/12/18 states--The anonymous complaint is for the Tim Perkins property on Elizaville Rd on Ewing Ky 41039. They are having for about 2-4 weeks an extremely strong manure/urine odor that permeates the vehicle as you drive by. The whole community is talking about it. Just very disgusting. He has manure ponds that are overflowing constantly and he has a massive amount of dead animals. Just very frustrating.

Source Name: Timothy Perkins Dairy Farm (AI ID: 101423)
Source Address: 3520 Elizaville Road
Substances: Not reported
Other Substances Desc: Not reported
Media Impacted: Env Protection
Inc ID: 2444457
Lead Invest Person ID: Not reported
Compliance: Yes
Notification: No
Priority: Routine
Incident End Date: Not reported
Follow Up Priority Desc: Not reported
Most Recent Comp Eval Activity: AI: 101423 CIV20180002
Most Recent ENF Activity: Not reported
Begin Emergency Date: Not reported
End Emergency Date: Not reported
MARS Function Code: Not reported
Locked: Yes
Closure Type Desc: Not reported
Latitude: 38.42264
Longitude: -83.79980

A7
Target
Property

FLEMINGSBURG, KY

SPILLS S117133271
N/A

Site 3 of 3 in cluster A

Actual:
912 ft.

Focus Map:
12

SPILLS:
Name: Not reported
Address: Not reported
City,State,Zip: FLEMINGSBURG, KY
Facility Status: Env. Closed
Incident Type: NON-PERMITTED DISCHARGE; STREAM DEGRADATION
Program Code: 11
Received By Staff: Gross, Matthew
Received Date: 06/02/2008
Report Date: 2008-05-23 11:05:08
Dispatch Description: Perkin's Dairy Farm has a lagoon that is leaking sewage into a ditch. The ditch leads from the pond and then empties directly into the creek. The lagoon is located right beside the road and the signs of sewage going into the creek are easily visible from the road.

Source Name: Timothy Perkins Dairy Farm (AI ID: 101423)
Source Address: Perkins Dairy Farm 3520 Elizaville Road Flemingsburg, KY
Substances: Sewage
Other Substances Desc: Not reported
Media Impacted: Wastewater

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S117133271

Inc ID: 2279186
Lead Invest Person ID: 40221
Compliance: Yes
Notification: No
Priority: Routine
Incident End Date: 2008-06-02 00:00:00
Follow Up Priority Desc: Not reported
Most Recent Comp Eval Activity: AI: 101423 CIV20080001
Most Recent ENF Activity: Not reported
Begin Emergency Date: Not reported
End Emergency Date: Not reported
MARS Function Code: Not reported
Locked: Yes
Closure Type Desc: Env. Closed-Mitigated
Latitude: 38.42264
Longitude: -83.79979

8

Target
Property

FLEMINGSBURG, KY

SPILLS S117175425
N/A

Actual:
909 ft.

Focus Map:
12

SPILLS:

Name: Not reported
Address: Not reported
City,State,Zip: FLEMINGSBURG, KY
Facility Status: Env. Closed
Incident Type: STREAM DEGRADATION
Program Code: 11
Received By Staff: Gross, Matthew
Received Date: 03/16/2011
Report Date: 2011-03-14 13:23:50
Dispatch Description: In Flemingsburg, KY the ERT was sent an anonymous complaint regarding a "manure pit draining" into a creek. The anonymous complainant stated he is concerned for the health of his cattle which probably drink in the same creek.

Source Name: Timothy Perkins Dairy Farm (AI ID: 101423)
Source Address: Timothy Perkins Dairy Farm
Substances: Not reported
Other Substances Desc: Animal Waste
Media Impacted: Wastewater
Inc ID: 2325993
Lead Invest Person ID: 40221
Compliance: Yes
Notification: No
Priority: Routine
Incident End Date: 2011-06-28 00:00:00
Follow Up Priority Desc: Not reported
Most Recent Comp Eval Activity: AI: 101423 CIV20170001
Most Recent ENF Activity: Not reported
Begin Emergency Date: Not reported
End Emergency Date: Not reported
MARS Function Code: Not reported
Locked: Yes
Closure Type Desc: Env. Closed-Mitigated
Latitude: 38.42233
Longitude: -83.79868

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s) EDR ID Number
 EPA ID Number

9 **FLEMING TIRE SERVICE INC**
ESE **KY 11 - BYPASS N**
1/4-1/2 **FLEMINGSBURG, KY 41041**
0.431 mi.
2277 ft.

SHWS **S117407413**
N/A

Actual:
929 ft.
Focus Map:
14

SHWS:
 Name: FLEMING TIRE SERVICE INC
 Address: KY 11 - BYPASS N
 City,State,Zip: FLEMINGSBURG, KY 41041
 Facility Id: 69853
Status: **Closed**
 Description: FLEMING TIRE SERVICE (Closed: Restored)
 Closure Date: 05/07/1996
 Longitude: -83.753359
 Latitude: 38.423623
 Subject Item County: Fleming
 Sub Item Longitude: -83.753380
 Sub Item Latitude: 38.423319
 Subject Item Address: KY 11 Bypass N
 Subject Item Address2: Not reported
 Subject Item City,St,Zip: Flemingsburg, KY 41041
 Regulatory Desc: Petroleum Cleanup
 Closure Option: Option C Restored
 Side SG: 39278

10 **FLEMING COUNTY STATE MAINT GARAGE #13**
ESE **ELIZAVILLE RD**
1/2-1 **FLEMINGSBURG, KY 41041**
0.525 mi.
2773 ft.

SHWS **U003990119**
N/A

Actual:
931 ft.
Focus Map:
14

SHWS:
 Name: FLEMING COUNTY STATE MAINT GARAGE #13
 Address: ELIZAVILLE RD
 City,State,Zip: FLEMINGSBURG, KY 41041
 Facility Id: 1123
Status: **Closed**
 Description: FLEMINGSBURG DOT DISTRICT OFFICE / KY TRANSPORTATI (Closed: Restored)
 Closure Date: 03/08/2004
 Longitude: -83.751296
 Latitude: 38.423782
 Subject Item County: Fleming
 Sub Item Longitude: -83.734970
 Sub Item Latitude: 38.418610
 Subject Item Address: 822 Elizaville Rd
 Subject Item Address2: Not reported
 Subject Item City,St,Zip: Flemingsburg, KY 41041
 Regulatory Desc: State Superfund
 Closure Option: Option C Restored
 Side SG: 46753

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number
EPA ID Number

11 FLEMING CO HOSPITAL
SE 920 ELIZAVILLE AVE
1/2-1 FLEMINGSBURG, KY 41041
0.707 mi.
3734 ft.

SHWS U000203917
UST N/A

Actual: 922 ft.
Focus Map: 14

SHWS:
Name: FLEMING CO HOSPITAL
Address: NONE
City,State,Zip: KY
Facility Id: 1119
Status: Closed
Description: FLEMING COUNTY HOSPITAL (Closed: Restored)
Closure Date: 07/26/1994
Longitude: -83.751492
Latitude: 38.422267
Subject Item County: Fleming
Sub Item Longitude: -83.733890
Sub Item Latitude: 38.422220
Subject Item Address: 920 Elizaville Ave
Subject Item Address2: Not reported
Subject Item City,St,Zip: Flemingsburg, KY 41041
Regulatory Desc: State Superfund
Closure Option: Option C Restored
Side SG: 20647

UST:
Name: FLEMING CO HOSPITAL
Address: 920 ELIZAVILLE AVE
City,State,Zip: FLEMINGSBURG, KY 41041
Sequence Id: 1938035
Facility ID: 1119
Owner Name: Fleming Co Hospital
Owner Address: PO Box 388
Owner Address2: Not reported
Owner Address3: Not reported
Owner City,St,Zip: Flemingsburg, KY 41041
Internal Document ID: 0
Latitude: 38.422267
Longitude: -83.751492

Inert Material Code: Not reported
Removed Date: Not reported
Change in Service Date: Not reported
Tank Pit Num: Not reported
Tank Mfg Code: Not reported
Tank Overfill Protection: UNK
Last Tank Test Date: Not reported
Relined Date: Not reported
Lining Insp Date: Not reported
Pipe Release Detection: NON
Pipe Rel Detect Suc Code: NON
Pipe Leak Detect Code: NA
Last Contained Date: Not reported
Pipe Mfg Code: Not reported
Last Pipe Test Date: Not reported
Last CP Test Date: Not reported
Added To Flex Date: Not reported
Added To Piping Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FLEMING CO HOSPITAL (Continued)

U000203917

Decode For Tstatus: Removed Tank Verified
Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel
Decode For Textcrprd: Unknown
Decode For Treltcd: Manual Tank Gauging
Decode For Tintprotcd: Not Applicable
Decode For Tsplprevcd: Unknown
Decode For Tovflprvcd: Unknown
Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Unknown
Decode For Ptypecode: Suction
Decode For Preltcd: None
Decode For Preltcdsuc: None
Decode For Plekdetcd: Not Applicable
Decode For Tsubcd: Diesel
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported
Subject Item ID: 3
Tank Status: TRM
Installation Date: 01/01/1962
Closed In Place Date: 03/05/1999
Capacity in Gallons: 8000
Compartment Number: 1
Piping Installation Date: Not reported
Added To Tank Date: Not reported

Inert Material Code: Not reported
Removed Date: 06/29/1999
Change in Service Date: Not reported
Tank Pit Num: Not reported
Tank Mfg Code: Not reported
Tank Overfill Protection: UNK
Last Tank Test Date: Not reported
Relined Date: Not reported
Lining Insp Date: Not reported
Pipe Release Detection: NON
Pipe Rel Detect Suc Code: NON
Pipe Leak Detect Code: NA
Last Contained Date: Not reported
Pipe Mfg Code: Not reported
Last Pipe Test Date: Not reported
Last CP Test Date: Not reported
Added To Flex Date: Not reported
Added To Piping Date: Not reported
Decode For Tstatus: Removed Tank Verified
Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel
Decode For Textcrprd: Unknown
Decode For Treltcd: Manual Tank Gauging
Decode For Tintprotcd: Not Applicable
Decode For Tsplprevcd: Unknown
Decode For Tovflprvcd: Unknown
Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Unknown
Decode For Ptypecode: Suction
Decode For Preltcd: None
Decode For Preltcdsuc: None

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FLEMING CO HOSPITAL (Continued)

U000203917

Decode For Plekdetcod: Not Applicable
Decode For Tsubcd: Diesel
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported
Subject Item ID: 2
Tank Status: TRM
Installation Date: 01/01/1984
Closed In Place Date: 03/05/1999
Capacity in Gallons: 550
Compartment Number: 1
Piping Installation Date: Not reported
Added To Tank Date: Not reported

Inert Material Code: Not reported
Removed Date: 07/02/1992
Change in Service Date: Not reported
Tank Pit Num: Not reported
Tank Mfg Code: Not reported
Tank Overfill Protection: UNK
Last Tank Test Date: Not reported
Relined Date: Not reported
Lining Insp Date: Not reported
Pipe Release Detection: UNK
Pipe Rel Detect Suc Code: UNK
Pipe Leak Detect Code: NA
Last Contained Date: Not reported
Pipe Mfg Code: Not reported
Last Pipe Test Date: Not reported
Last CP Test Date: Not reported
Added To Flex Date: Not reported
Added To Piping Date: Not reported
Decode For Tstatus: Exempt
Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel
Decode For Textcrprd: Unknown
Decode For Treldetcod: None
Decode For Tintprotcd: Unknown
Decode For Tsplprevcd: Unknown
Decode For Tovflprvcd: Unknown
Decode For Pmatcode: Unknown
Decode For Pextcoprcd: Unknown
Decode For Ptypecode: Unknown
Decode For Preldetcod: Unknown
Decode For Preldetsuc: Unknown
Decode For Plekdetcod: Not Applicable
Decode For Tsubcd: Fuel Oil
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported
Subject Item ID: 1
Tank Status: TEX
Installation Date: 01/01/1980
Closed In Place Date: Not reported
Capacity in Gallons: 250
Compartment Number: 1
Piping Installation Date: Not reported
Added To Tank Date: Not reported

Count: 12 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ELIZAVILLE	S109156394	ELIZAVILLE STATION	JUNCTION KY 32 & KY 170	41039	Financial Assurance
EWING	1015924206	ROYAL DAIRY FARM	JUNCTION RD	41039	FINDS
FLEMING COUNTY	S123236238	FLEMINGSBURG HOSPITAL-PETE MIDDEN	920 ELIZAVILLE AVENUE		ASBESTOS
FLEMING COUNTY	S123239347	KYTC	16 PIKE BLUFF 5664 ELIZAVILLE RD.		ASBESTOS
FLEMINGSBURG	S106664667	STEVE'S LAKEWOOD SERVICE	ELIZAVILLE AVE		SB193
FLEMINGSBURG	1000518705	ASHLAND INC #239-004	ELIZAVILLE ROAD	41041	RCRA NonGen / NLR
FLEMINGSBURG	1000826347	ASHLAND PETROLEUM COMPANY #239-000	ELIZAVILLE RD/BULK PLANT #239	41041	RCRA NonGen / NLR
FLEMINGSBURG	1001232280	KENTUCKY DEPT OF HWYS	HWY 559 CONVICT PIKE	41041	RCRA NonGen / NLR
FLEMINGSBURG	1004509800	FLEMING-MASON RURAL ELECTRIC	ELIZAVILLE ROAD	41041	PADS
FLEMINGSBURG	S124501178	CHARTER COMMUNICATIONS - FLEMINGSBURG CEL TOWER ENGINE	CASSIDY PIKE	41041	AIRS
FLEMINGSBURG	S125982117	FLEMING MASON ENERGY COOPERATIVE; FLEMING MASON EMERGY COOPERATIVE (ADMIN. OFFICE)	RENOVATION AT 1449 ELIZAVILLE RD.	41041	ASBESTOS
FLEMINGSBURG	S108020092	STEVE'S LAKEWOOD SERVICE	ELIZAVILLE AVE.	41041	Financial Assurance

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: N/A
Date Made Active in Reports: 05/28/2020	Last EDR Contact: 06/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/13/2020
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: N/A
Date Made Active in Reports: 05/28/2020	Last EDR Contact: 06/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/13/2020
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: 800-424-9346
Date Made Active in Reports: 05/28/2020	Last EDR Contact: 06/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/27/2020
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020	Source: EPA
Date Data Arrived at EDR: 03/25/2020	Telephone: 800-424-9346
Date Made Active in Reports: 05/21/2020	Last EDR Contact: 03/25/2020
Number of Days to Update: 57	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/25/2020	Telephone: (404) 562-8651
Date Made Active in Reports: 05/21/2020	Last EDR Contact: 03/25/2020
Number of Days to Update: 57	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/25/2020	Telephone: (404) 562-8651
Date Made Active in Reports: 05/21/2020	Last EDR Contact: 03/25/2020
Number of Days to Update: 57	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/25/2020	Telephone: (404) 562-8651
Date Made Active in Reports: 05/21/2020	Last EDR Contact: 03/25/2020
Number of Days to Update: 57	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/25/2020	Telephone: (404) 562-8651
Date Made Active in Reports: 05/21/2020	Last EDR Contact: 03/25/2020
Number of Days to Update: 57	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/04/2019	Source: Department of the Navy
Date Data Arrived at EDR: 11/13/2019	Telephone: 843-820-7326
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 05/14/2020
Number of Days to Update: 76	Next Scheduled EDR Contact: 08/24/2020
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/20/2020	Telephone: 703-603-0695
Date Made Active in Reports: 05/15/2020	Last EDR Contact: 05/15/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 09/07/2020
	Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/20/2020	Telephone: 703-603-0695
Date Made Active in Reports: 05/15/2020	Last EDR Contact: 05/15/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 09/07/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 78

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: State Leads List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/03/2020
Number of Days to Update: 14

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/11/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/29/2020
Number of Days to Update: 69

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

PSTEAF: Facility Ranking List

The Underground Storage Tank Branch (USTB) has ranked all PSTEAF reimbursable facilities requiring corrective action, in accordance with 401 KAR 42:290. Directive letters will be issued on the basis of facility ranking and available PSTEAF funding in sequential order as ranked. For example, Rank 2 facilities will be issued directives before Rank 3 facilities.

Date of Government Version: 01/01/2020
Date Data Arrived at EDR: 01/08/2020
Date Made Active in Reports: 03/13/2020
Number of Days to Update: 65

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 04/07/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019	Source: EPA Region 7
Date Data Arrived at EDR: 12/17/2019	Telephone: 913-551-7003
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 55	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/04/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/04/2019	Telephone: 415-972-3372
Date Made Active in Reports: 02/27/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019	Source: EPA Region 10
Date Data Arrived at EDR: 12/04/2019	Telephone: 206-553-2857
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019	Source: EPA Region 6
Date Data Arrived at EDR: 12/04/2019	Telephone: 214-665-6597
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019	Source: EPA Region 4
Date Data Arrived at EDR: 12/05/2019	Telephone: 404-562-8677
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 67	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019	Source: EPA Region 8
Date Data Arrived at EDR: 12/04/2019	Telephone: 303-312-6271
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019	Source: EPA Region 1
Date Data Arrived at EDR: 12/04/2019	Telephone: 617-918-1313
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SB193: SB193 Branch Site Inventory List

The inventory indicates facilities that have performed permanent closure activities at a regulated underground storage tank facility and have known soil and/or groundwater contamination.

Date of Government Version: 09/05/2006	Source: Department of Environmental Protection
Date Data Arrived at EDR: 09/13/2006	Telephone: 502-564-5981
Date Made Active in Reports: 10/18/2006	Last EDR Contact: 04/08/2016
Number of Days to Update: 35	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020	Source: FEMA
Date Data Arrived at EDR: 03/19/2020	Telephone: 202-646-5797
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 03/19/2020
Number of Days to Update: 82	Next Scheduled EDR Contact: 07/20/2020
	Data Release Frequency: Varies

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/04/2020	Source: Department of Environmental Protection
Date Data Arrived at EDR: 02/25/2020	Telephone: 502-564-5981
Date Made Active in Reports: 05/06/2020	Last EDR Contact: 05/26/2020
Number of Days to Update: 71	Next Scheduled EDR Contact: 09/07/2020
	Data Release Frequency: Quarterly

AST: Above Ground Storage Tanks

A listing of aboveground storage tank site locations.

Date of Government Version: 02/19/2020	Source: Office of State Fire Marshal
Date Data Arrived at EDR: 02/20/2020	Telephone: 502-564-4010
Date Made Active in Reports: 04/29/2020	Last EDR Contact: 05/19/2020
Number of Days to Update: 69	Next Scheduled EDR Contact: 09/07/2020
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019	Source: EPA Region 6
Date Data Arrived at EDR: 12/04/2019	Telephone: 214-665-7591
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019	Source: EPA Region 5
Date Data Arrived at EDR: 12/04/2019	Telephone: 312-886-6136
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019	Source: EPA Region 4
Date Data Arrived at EDR: 12/05/2019	Telephone: 404-562-9424
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 67	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019	Source: EPA Region 9
Date Data Arrived at EDR: 12/04/2019	Telephone: 415-972-3368
Date Made Active in Reports: 02/27/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019	Source: EPA Region 10
Date Data Arrived at EDR: 12/04/2019	Telephone: 206-553-2857
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019	Source: EPA, Region 1
Date Data Arrived at EDR: 12/04/2019	Telephone: 617-918-1313
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019	Source: EPA Region 8
Date Data Arrived at EDR: 12/04/2019	Telephone: 303-312-6137
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019	Source: EPA Region 7
Date Data Arrived at EDR: 12/04/2019	Telephone: 913-551-7003
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/20/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site Listing

A listing of sites that use engineering controls.

Date of Government Version: 05/19/2020	Source: Department of Environmental Protection
Date Data Arrived at EDR: 05/20/2020	Telephone: 502-564-6716
Date Made Active in Reports: 06/04/2020	Last EDR Contact: 05/19/2020
Number of Days to Update: 15	Next Scheduled EDR Contact: 09/07/2020
	Data Release Frequency: Varies

INST CONTROL: State Superfund Database

A list of closed sites in the State Superfund Database. Institutional controls would be in place at any site that uses Contained or Managed as a Closure Option.

Date of Government Version: 05/19/2020	Source: Department of Environmental Protection
Date Data Arrived at EDR: 05/20/2020	Telephone: 502-564-6716
Date Made Active in Reports: 06/03/2020	Last EDR Contact: 05/19/2020
Number of Days to Update: 14	Next Scheduled EDR Contact: 09/07/2020
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 03/18/2020
Number of Days to Update: 142	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites

Sites that have been accepted into the Voluntary Cleanup Program or have submitted an application.

Date of Government Version: 03/23/2020	Source: Department of Environmental Protection
Date Data Arrived at EDR: 03/24/2020	Telephone: 502-564-6716
Date Made Active in Reports: 06/04/2020	Last EDR Contact: 03/20/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 07/13/2020
	Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Kentucky Brownfield Inventory

The Kentucky Brownfield Program has created an inventory of brownfield sites in order to market the properties to those interested in brownfield redevelopment. The Kentucky Brownfield Program is working to promote the redevelopment of these sites by helping to remove barriers that prevent reuse, providing useful information to communities, developers and the public and encouraging a climate that fosters redevelopment of contaminated sites.

Date of Government Version: 02/10/2020	Source: Division of Compliance Assistance
Date Data Arrived at EDR: 02/11/2020	Telephone: 502-564-0323
Date Made Active in Reports: 04/20/2020	Last EDR Contact: 04/02/2020
Number of Days to Update: 69	Next Scheduled EDR Contact: 07/27/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/02/2020	Telephone: 202-566-2777
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 06/02/2020
Number of Days to Update: 7	Next Scheduled EDR Contact: 06/29/2020
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities

A listing of recycling facilities located in the state of Kentucky.

Date of Government Version: 09/13/2019	Source: Department of Environmental Protection
Date Data Arrived at EDR: 10/23/2019	Telephone: 502-564-6716
Date Made Active in Reports: 01/03/2020	Last EDR Contact: 04/17/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 07/27/2020
	Data Release Frequency: Varies

HIST LF: Historical Landfills

This solid waste facility listing contains detail information that is not included in the landfill listing. A listing with detail information is no longer available by the Department of Environmental Protection.

Date of Government Version: 05/01/2003	Source: Department of Environmental Protection
Date Data Arrived at EDR: 03/30/2006	Telephone: 502-564-6716
Date Made Active in Reports: 05/01/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 32	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 04/16/2020
Number of Days to Update: 52	Next Scheduled EDR Contact: 08/10/2020
	Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 04/09/2020
Number of Days to Update: 137	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/01/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Location Listing

Clandestine drug lab site locations.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/03/2020
Number of Days to Update: 56

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/05/2019
Date Data Arrived at EDR: 12/06/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 70

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

SPILLS: State spills

A listing of spill and/or release related incidents.

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: DEP, Emergency Response
Telephone: 502-564-2380
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/28/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 04/06/2020
Number of Days to Update: 574	Next Scheduled EDR Contact: 07/20/2020
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2017	Telephone: 615-532-8599
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 05/15/2020
Number of Days to Update: 63	Next Scheduled EDR Contact: 08/24/2020
	Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/16/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/19/2019	Telephone: 202-566-1917
Date Made Active in Reports: 02/27/2020	Last EDR Contact: 03/24/2020
Number of Days to Update: 70	Next Scheduled EDR Contact: 07/06/2020
	Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 05/04/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 08/17/2020
	Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 05/08/2020
Number of Days to Update: 73	Next Scheduled EDR Contact: 08/17/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016	Source: EPA
Date Data Arrived at EDR: 06/21/2017	Telephone: 202-260-5521
Date Made Active in Reports: 01/05/2018	Last EDR Contact: 03/20/2020
Number of Days to Update: 198	Next Scheduled EDR Contact: 06/29/2020
	Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018	Source: EPA
Date Data Arrived at EDR: 02/05/2020	Telephone: 202-566-0250
Date Made Active in Reports: 04/24/2020	Last EDR Contact: 05/21/2020
Number of Days to Update: 79	Next Scheduled EDR Contact: 08/31/2020
	Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 05/01/2019	Source: EPA
Date Data Arrived at EDR: 10/23/2019	Telephone: 202-564-4203
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 04/21/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: 703-416-0223
Date Made Active in Reports: 05/28/2020	Last EDR Contact: 06/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/14/2020
	Data Release Frequency: Annually

RMP: Risk Management Plans

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/05/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/20/2019	Telephone: 202-564-8600
Date Made Active in Reports: 04/17/2020	Last EDR Contact: 04/15/2020
Number of Days to Update: 149	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: 202-564-6023
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 06/03/2020
Number of Days to Update: 34	Next Scheduled EDR Contact: 08/17/2020
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019	Source: EPA
Date Data Arrived at EDR: 10/11/2019	Telephone: 202-566-0500
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 04/10/2020
Number of Days to Update: 70	Next Scheduled EDR Contact: 07/20/2020
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 03/26/2020
Number of Days to Update: 79	Next Scheduled EDR Contact: 07/20/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 10/25/2019	Telephone: 301-415-7169
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 04/10/2020
Number of Days to Update: 82	Next Scheduled EDR Contact: 08/03/2020
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018	Source: Department of Energy
Date Data Arrived at EDR: 12/04/2019	Telephone: 202-586-8719
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 06/05/2020
Number of Days to Update: 42	Next Scheduled EDR Contact: 09/14/2020
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 06/01/2020
Number of Days to Update: 251	Next Scheduled EDR Contact: 09/14/2020
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/08/2020
Number of Days to Update: 96	Next Scheduled EDR Contact: 08/17/2020
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/17/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014	Source: USGS
Date Data Arrived at EDR: 07/14/2015	Telephone: 202-208-3710
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 04/10/2020
Number of Days to Update: 546	Next Scheduled EDR Contact: 07/20/2020
	Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017	Source: Department of Energy
Date Data Arrived at EDR: 09/11/2018	Telephone: 202-586-3559
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 04/29/2020
Number of Days to Update: 3	Next Scheduled EDR Contact: 08/17/2020
	Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019	Source: Department of Energy
Date Data Arrived at EDR: 11/15/2019	Telephone: 505-845-0011
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 05/18/2020
Number of Days to Update: 74	Next Scheduled EDR Contact: 08/31/2020
	Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/06/2020	Telephone: 703-603-8787
Date Made Active in Reports: 05/28/2020	Last EDR Contact: 06/03/2020
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/13/2020
	Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/11/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 86

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 50

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/22/2020
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/05/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/07/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

AIRS: Permitted Airs Facility Listing

A listing of permitted Airs facilities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/14/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 70

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Semi-Annually

ASBESTOS: Asbestos Notification Listing Asbestos sites

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 06/04/2020
Number of Days to Update: 6

Source: Department of Environmental Protection
Telephone: 502-782-6780
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites A listing of coal ash pond site locations.

Date of Government Version: 04/17/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 05/06/2020
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: No Update Planned

DRYCLEANERS: Drycleaner Listing A listing of drycleaner facility locations.

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/14/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 70

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Semi-Annually

Financial Assurance 1: Financial Assurance Information Listing A listing of financial assurance information.

Date of Government Version: 02/17/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/29/2020
Number of Days to Update: 69

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing Financial Assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 06/24/2014
Number of Days to Update: 18

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information Listing A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/29/2020
Number of Days to Update: 69

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LEAD: Environmental Lead Program Report Tracking Database Lead Report Tracking Database

Date of Government Version: 01/27/2017
Date Data Arrived at EDR: 02/02/2017
Date Made Active in Reports: 08/21/2017
Number of Days to Update: 200

Source: Department of Public Health
Telephone: 502-564-4537
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

NPDES: Permitted Facility Listing A listing of permitted wastewater facilities.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/06/2020
Number of Days to Update: 70

Source: Department of Environmental Protection
Telephone: 502-564-3410
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Semi-Annually

UIC: UIC Information

A listing of wells identified as underground injection wells, in the Kentucky Oil & Gas Wells data base.

Date of Government Version: 12/04/2019
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/13/2020
Number of Days to Update: 59

Source: Kentucky Geological Survey
Telephone: 859-323-0544
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/09/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/15/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 198	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/30/2020	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 01/30/2020	Telephone: 860-424-3375
Date Made Active in Reports: 03/09/2020	Last EDR Contact: 05/12/2020
Number of Days to Update: 39	Next Scheduled EDR Contact: 08/24/2020
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/10/2019	Telephone: N/A
Date Made Active in Reports: 05/16/2019	Last EDR Contact: 04/10/2020
Number of Days to Update: 36	Next Scheduled EDR Contact: 07/20/2020
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 05/01/2019	Telephone: 518-402-8651
Date Made Active in Reports: 06/21/2019	Last EDR Contact: 04/29/2020
Number of Days to Update: 51	Next Scheduled EDR Contact: 08/10/2020
	Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/19/2019	Telephone: 717-783-8990
Date Made Active in Reports: 09/10/2019	Last EDR Contact: 04/02/2020
Number of Days to Update: 53	Next Scheduled EDR Contact: 07/27/2020
	Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Certified Child Care Homes

Source: Cabinet for Families & Children
Telephone: 502-564-7130

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

STREET AND ADDRESS INFORMATION

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APPENDIX C. EDR AERIAL PHOTOGRAPHS

Date EDR Searched Historical Sources:

Aerial Photography June 12, 2020

Target Property:

Fleming Solar

Flemingsburg, KY 41041

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1947-1948	Aerial Photograph. Scale:	Flight Year: 1947-1948	USGS
1950	Aerial Photograph. Scale:	Flight Year: 1950	USGS
1960	Aerial Photograph. Scale:	Flight Year: 1960	USGS
1975	Aerial Photograph. Scale:	Flight Year: 1975	USGS
1983	Aerial Photograph. Scale:	Flight Year: 1983	USDA
1995	Aerial Photograph. Scale:	Flight Year: 1995	DOQQ_USGS
2004	Aerial Photograph. Scale:	Flight Year: 2004	NAIP_USGS
2008	Aerial Photograph. Scale:	Flight Year: 2008	NAIP_USGS
2012	Aerial Photograph. Scale:	Flight Year: 2012	NAIP_USGS
2016	Aerial Photograph. Scale:	Flight Year: 2016	NAIP_USGS














APPENDIX D. EDR HISTORICAL TOPO MAP REPORT



Fleming Solar

Fleming Solar

Flemingsburg, KY 41041

Inquiry Number: 6088382.5

June 12, 2020

EDR Historical Topo Map Report

with QuadMatch™



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/12/20

Site Name:

Fleming Solar
Fleming Solar
Flemingsburg, KY 41041
EDR Inquiry # 6088382.5

Client Name:

Tetra Tech MM
6307 Center Street, Suite 210
Omaha, NE 68106
Contact: David Hermance



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Tetra Tech MM were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

Coordinates:

P.O.# NA
Project: NA

Latitude: 38.433435 38° 26' 0" North
Longitude: -83.7978 -83° 47' 52" West
UTM Zone: Zone 17 North
UTM X Meters: 255791.16
UTM Y Meters: 4257615.26
Elevation: 983.76' above sea level

Maps Provided:

2013
1978
1978, 1979
1952
1951, 1952

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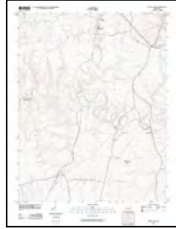
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

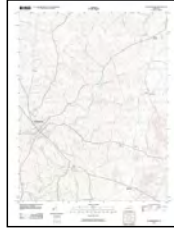
2013 Source Sheets



Elizaville
2013
7.5-minute, 24000



Mays Lick
2013
7.5-minute, 24000



Flemingsburg
2013
7.5-minute, 24000

1978 Source Sheets



Elizaville
1978
7.5-minute, 24000
Aerial Photo Revised 1975



Mays Lick
1978
7.5-minute, 24000
Aerial Photo Revised 1975

1978, 1979 Source Sheets



Flemingsburg
1979
7.5-minute, 24000
Aerial Photo Revised 1975

1952 Source Sheets



Elizaville
1952
7.5-minute, 24000
Aerial Photo Revised 1950



Mays Lick
1952
7.5-minute, 24000
Aerial Photo Revised 1950

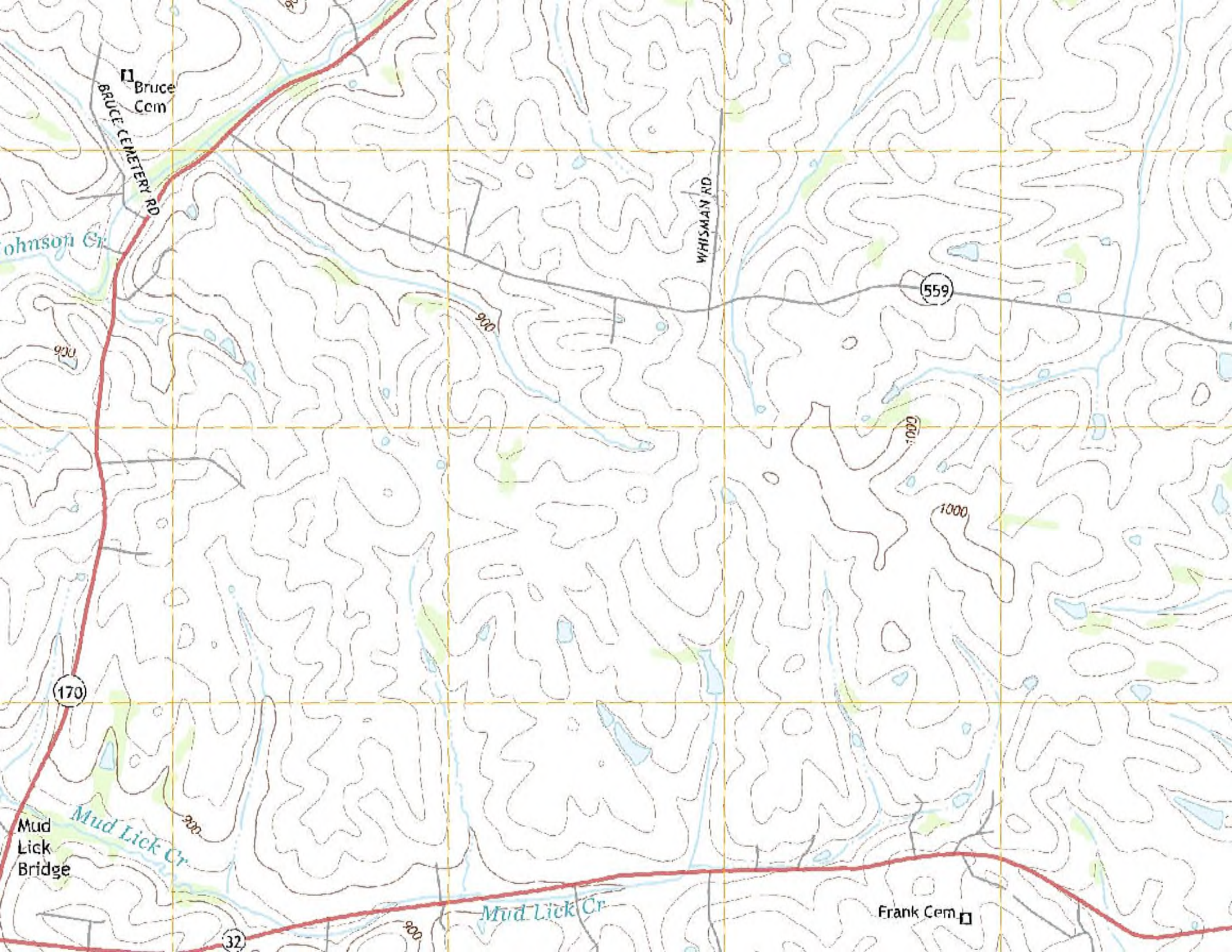
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1951, 1952 Source Sheets



Flemingsburg
1951
7.5-minute, 24000
Aerial Photo Revised 1948



Bruce Cem

BRUCE CEMETERY RD

Johnson Cr

WHISMAN RD

559

170

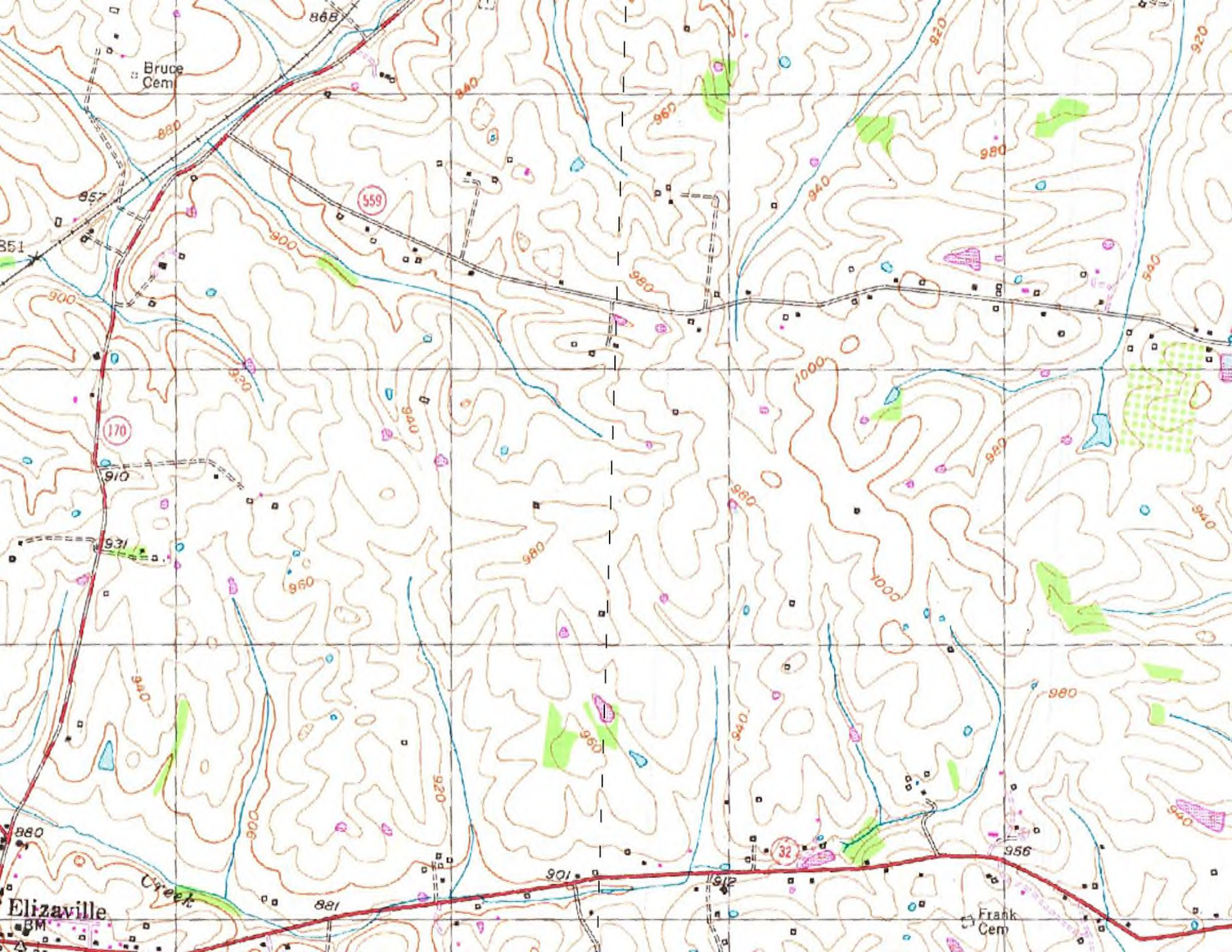
Mud Lick Bridge

Mud Lick Cr

Mud Lick Cr

Frank Cem

32



Bruce Cem

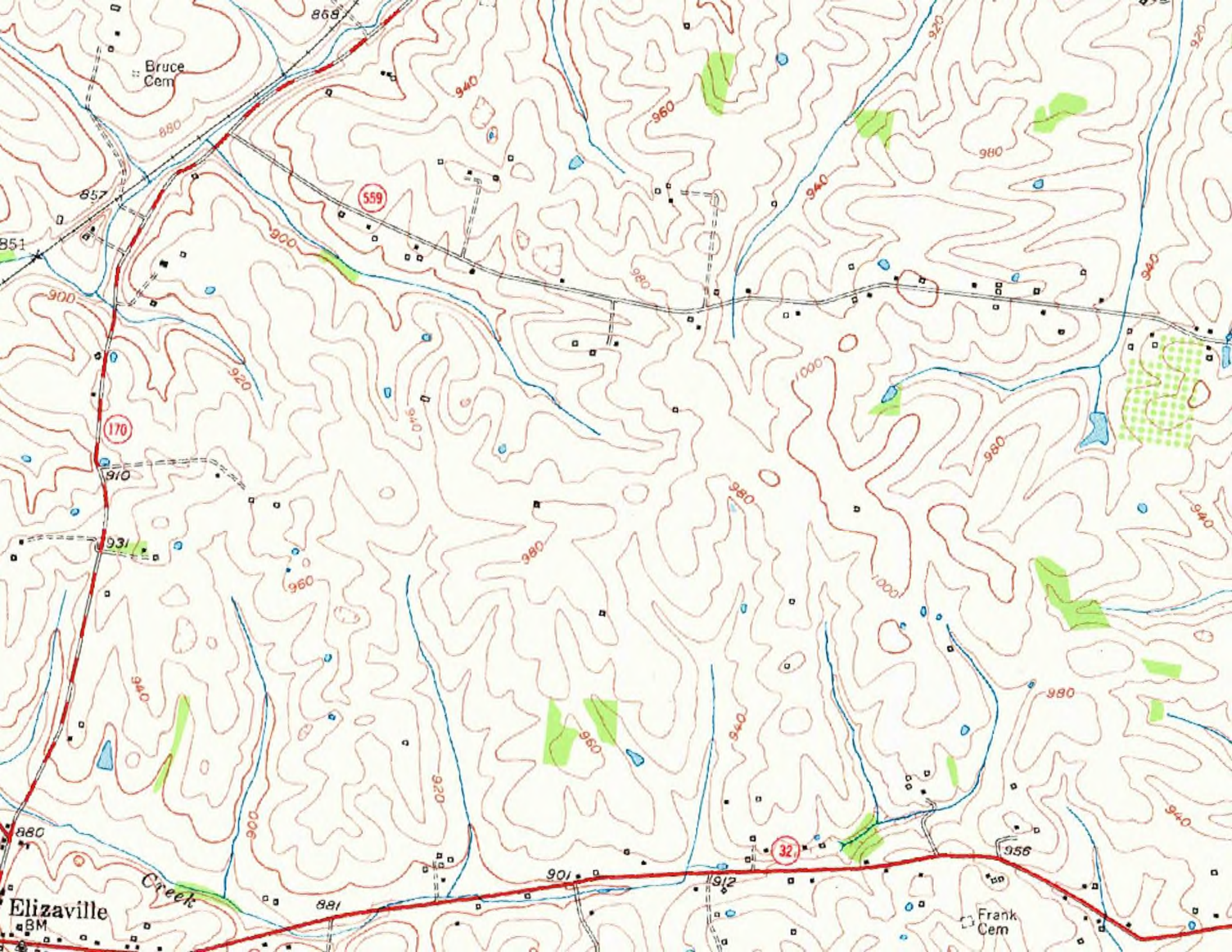
170

Elizaville

Creek

Frank Cem

32



Bruce Cem

559

170

32

Elizaville

Frank Cem













Creek

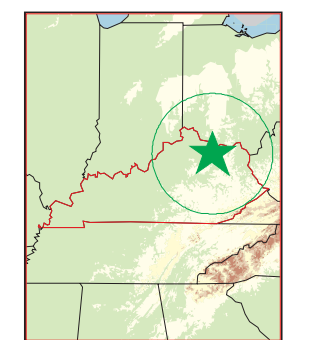
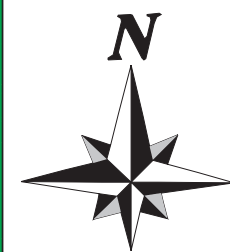
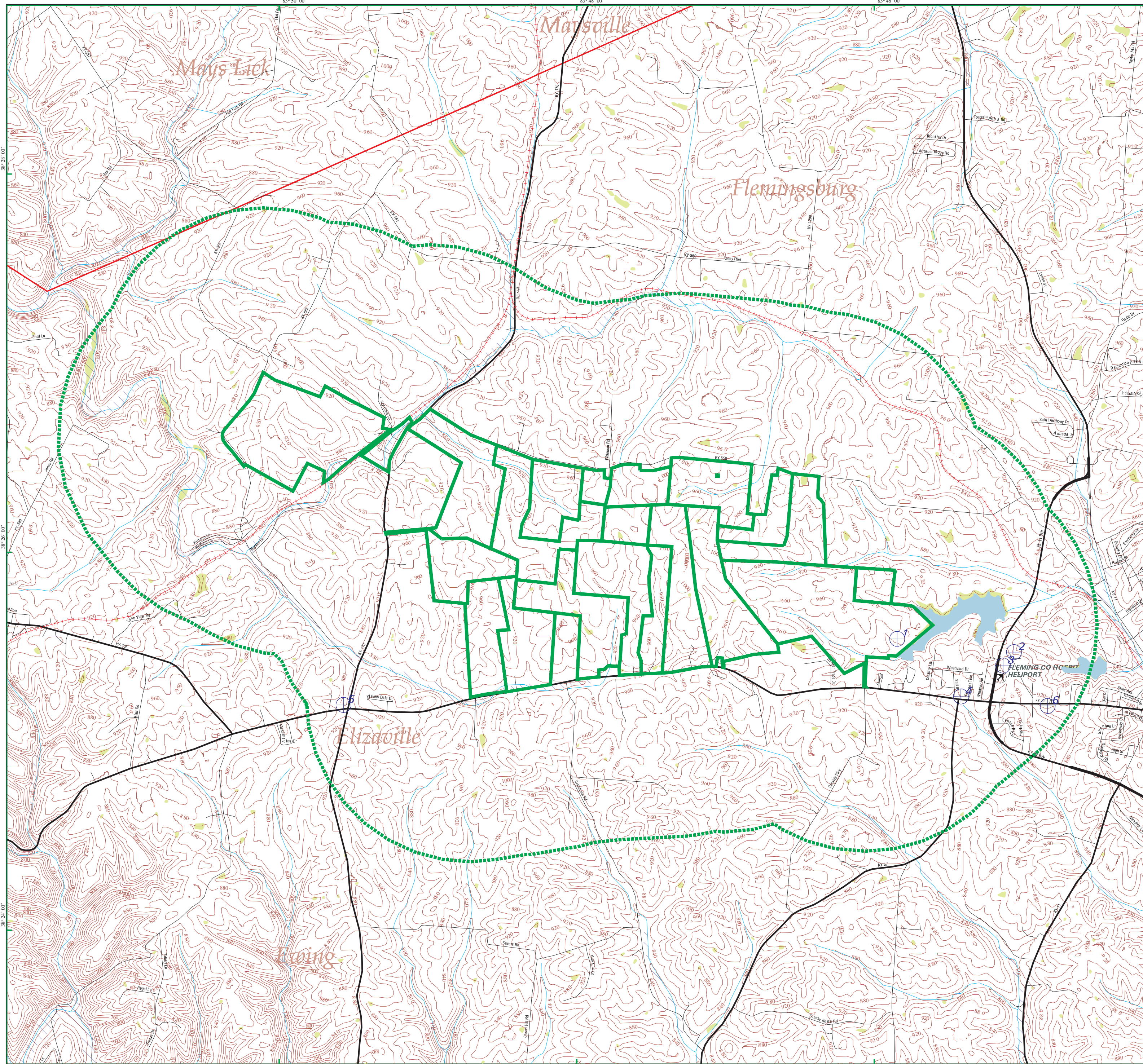


APPENDIX E. EDR DATAMAP™ WELL SEARCH REPORT

EDR DataMap® Well Search

Fleming Solar

-  Listed Water Wells
-  Study Boundary
-  Roads
-  Major Roads
-  Waterways
-  Railroads
-  Contour Lines
-  Fault Lines
-  Water
-  Superfund Sites
-  100-Yr Flood Zones
-  Wetlands



Flemingsburg, KY



Scale in Miles



Fleming Solar

Flemingsburg, KY 41041

Inquiry Number: 6088382.2w

June 10, 2020

EDR DataMap™ Well Search Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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**GEOCHECK VERSION 2.1
SUMMARY**

FEDERAL DATABASE WELL INFORMATION

MAP ID _____ WELL ID _____

NO WELLS FOUND

STATE WATER WELL INFORMATION

MAP ID	WELL ID
2	KY6000000074538
2	KY6000000074539
2	KY6000000086321
2	KY6000000086322
3	KY6000000074537
4	KY6000000062015
4	KY6000000062014
4	KY6000000065425
4	KY6000000065424
5	KY6000000096373
5	KY6000000091774
5	KY6000000091786
5	KY6000000094320
5	KY6000000091784
5	KY6000000091785
5	KY6000000085842
5	KY6000000086358
5	KY6000000083958
5	KY6000000083956
5	KY6000000083957
5	KY6000000086359
5	KY6000000083954
5	KY6000000083953
5	KY6000000083955
5	KY6000000086360
5	KY6000000086361
6	KY6000000078805
6	KY6000000078803
6	KY6000000078801
5	KY6000000088076
5	KY6000000096374
5	KY6000000096375

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Map ID: 1
PWS ID: KY0350133
PWS Name: FLEMING CO WATER ASSOCIATION
EUGENE JETT
P O BOX 327
FLEMINGSBURG, KY 410410000

PWS currently has or had major violation(s) or enforcement: YES

GEOCHECK VERSION 2.1 SUMMARY

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Map ID: 3
 PWS ID: KY0350134
 PWS Name: FLEMINGSBURG UTILITY SYSTEM
 GLENN MCVEY
 P O BOX 126
 FLEMINGSBURG, KY 410410000
 PWS currently has or had major violation(s) or enforcement: YES

USGS TOPOGRAPHIC MAP(S)

38083-D6 FLEMINGSBURG, KY
 38083-D7 ELIZAVILLE, KY

AREA RADON INFORMATION

Federal Area Radon Information for Zip Code: 41041

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	7.800 pCi/L	0%	100%	0%

Federal EPA Radon Zone for MASON County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for MASON COUNTY, KY

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.050 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.360 pCi/L	100%	0%	0%

Federal EPA Radon Zone for FLEMING County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for FLEMING COUNTY, KY

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.700 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	7.800 pCi/L	0%	100%	0%

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Fid:	62013	Akgwa:	80005304
Altid:	MW-02	Latdecimal:	38.42055556
Longdecima:	-83.75694444	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	900
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000062014
Enddate:	16-JUN-93		

Map ID:	4	Akgwa:	80010405
Fid:	65424	Latdecimal:	38.42055556
Altid:	MW-01	County:	Fleming
Longdecima:	-83.75694444	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	900
Type:	M	Site id:	KY6000000065425
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	15-JUN-93		

Map ID:	4	Akgwa:	80010404
Fid:	65423	Latdecimal:	38.42055556
Altid:	MW-04	County:	Fleming
Longdecima:	-83.75694444	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	900
Type:	M	Site id:	KY6000000065424
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	16-JUN-93		

Map ID:	5	Akgwa:	80062771
Fid:	96372	Latdecimal:	38.419967
Altid:	MW-18	County:	Fleming
Longdecima:	-83.826071	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Enddate:	15-DEC-11
Usage:	Remediation		
Site id:	KY6000000096373		

Map ID:	5	Akgwa:	80055452
Fid:	91773	Latdecimal:	38.419954
Altid:	MW-16	County:	Fleming
Longdecima:	-83.826239	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Site id:	KY6000000091774
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	08-APR-10		

Map ID:	5	Akgwa:	80055466
Fid:	91785	Latdecimal:	38.41987
Altid:	MW-15	County:	Fleming
Longdecima:	-83.826379	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	882
Type:	M	Enddate:	12-FEB-09
Usage:	Monitoring Well - Compliance		
Site id:	KY6000000091786		

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Fid:	94319	Akgwa:	80059370
Altid:	MW-17	Latdecimal:	38.419849
Longdecima:	-83.825864	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	0
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000094320
Enddate:	08-APR-10		

Map ID:	5	Akgwa:	80055464
Fid:	91783	Latdecimal:	38.419808
Altid:	MW-13	County:	Fleming
Longdecima:	-83.826011	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	879
Type:	M	Enddate:	12-FEB-09
Usage:	Monitoring Well - Compliance		
Site id:	KY6000000091784		

Map ID:	5	Akgwa:	80055465
Fid:	91784	Latdecimal:	38.419802
Altid:	MW-14	County:	Fleming
Longdecima:	-83.826279	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	882
Type:	M	Enddate:	12-FEB-09
Usage:	Monitoring Well - Compliance		
Site id:	KY6000000091785		

Map ID:	5	Akgwa:	80046479
Fid:	85841	Latdecimal:	38.41972222
Altid:	MW-07	County:	Fleming
Longdecima:	-83.82638889	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Site id:	KY6000000085842
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	26-DEC-02		

Map ID:	5	Akgwa:	80047316
Fid:	86357	Latdecimal:	38.41972222
Altid:	MW-08	County:	Fleming
Longdecima:	-83.82638889	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Site id:	KY6000000086358
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	20-JAN-03		

Map ID:	5	Akgwa:	80044020
Fid:	83957	Latdecimal:	38.41972222
Altid:	MW-06	County:	Fleming
Longdecima:	-83.82638889	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Site id:	KY6000000083958
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	06-DEC-01		

**GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION**

Fid:	83955	Akgwa:	80044018
Altid:	MW-04	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000083956
Enddate:	06-DEC-01		

Map ID:	5		
Fid:	83956	Akgwa:	80044019
Altid:	MW-05	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000083957
Enddate:	06-DEC-01		

Map ID:	5		
Fid:	86358	Akgwa:	80047317
Altid:	MW-09	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000086359
Enddate:	20-JAN-03		

Map ID:	5		
Fid:	83953	Akgwa:	80044016
Altid:	MW-02	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000083954
Enddate:	06-DEC-01		

Map ID:	5		
Fid:	83952	Akgwa:	80044015
Altid:	MW-01	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000083953
Enddate:	06-DEC-01		

Map ID:	5		
Fid:	83954	Akgwa:	80044017
Altid:	MW-03	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000083955
Enddate:	06-DEC-01		

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Fid:	86359	Akgwa:	80047318
Altid:	MW-10	Latdecimal:	38.41972222
Longdecima:	-83.82638889	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Monitoring Well - Ambient Monitoring	Site id:	KY6000000086360
Enddate:	20-JAN-03		

Map ID:	5	Akgwa:	80047319
Fid:	86360	Latdecimal:	38.41972222
Altid:	MW-11	County:	Fleming
Longdecima:	-83.82638889	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Site id:	KY6000000086361
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	20-JAN-03		

Map ID:	6	Akgwa:	80036706
Fid:	78804	Latdecimal:	38.41972222
Altid:	MW-03	County:	Fleming
Longdecima:	-83.74722222	Physiograp:	Bluegrass
Quadname:	Flemingsburg	Surfaceele:	900
Type:	M	Site id:	KY6000000078805
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	19-FEB-99		

Map ID:	6	Akgwa:	80036704
Fid:	78802	Latdecimal:	38.41972222
Altid:	MW-02	County:	Fleming
Longdecima:	-83.74722222	Physiograp:	Bluegrass
Quadname:	Flemingsburg	Surfaceele:	900
Type:	M	Site id:	KY6000000078803
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	19-FEB-99		

Map ID:	6	Akgwa:	80036702
Fid:	78800	Latdecimal:	38.41972222
Altid:	MW-01	County:	Fleming
Longdecima:	-83.74722222	Physiograp:	Bluegrass
Quadname:	Flemingsburg	Surfaceele:	900
Type:	M	Site id:	KY6000000078801
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	18-FEB-99		

Map ID:	5	Akgwa:	80049407
Fid:	88075	Latdecimal:	38.419722
Altid:	MW-12	County:	Fleming
Longdecima:	-83.826389	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Site id:	KY6000000088076
Usage:	Monitoring Well - Ambient Monitoring		
Enddate:	19-NOV-03		

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Fid:	96373	Akgwa:	80062772
Altid:	MW-19	Latdecimal:	38.419677
Longdecima:	-83.826	County:	Fleming
Quadname:	Elizaville	Physiograp:	Bluegrass
Type:	M	Surfaceele:	880
Usage:	Remediation	Enddate:	15-DEC-11
Site id:	KY6000000096374		

Map ID:	5	Akgwa:	80062773
Fid:	96374	Latdecimal:	38.419604
Altid:	MW-20	County:	Fleming
Longdecima:	-83.825957	Physiograp:	Bluegrass
Quadname:	Elizaville	Surfaceele:	880
Type:	M	Enddate:	15-DEC-11
Usage:	Remediation		
Site id:	KY6000000096375		

GEOCHECK VERSION 2.1

PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

Map ID:	1		
Epa region:	04	State:	KY
Pwsid:	KY0350133	Pwsname:	FLEMING CO WATER ASSOCIATION
Cityserved:	Not Reported	Stateserved:	KY
Ziperved:	Not Reported	Fipscounty:	21069
Status:	Active	Retpopsrvd:	11779
Pwssvconn:	3966	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Private
Contact:	JETT, EUGENE	Contactorgname:	JETT, EUGENE
Contactphone:	606-845-3981	Contactaddress1:	PO BOX 327
Contactaddress2:	Not Reported	Contactcity:	FLEMINGSBURG
Contactstate:	KY	Contactzip:	41041
Pwsactivitycode:	A		
PWS ID:	KY0350133	PWS name:	FLEMING CO WATER ASSOCIATION
Address:	P O BOX 327	Care of:	EUGENE JETT
City:	FLEMINGSBURG	State:	KY
Zip:	410410000	Owner:	FLEMING CO WATER ASSOCIATION
Source code:	Purchases surface water	Population:	7937
PWS ID:	KY0350133	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	FLEMING CO WATER ASSOCIATION
PWS type code:	C	Retail population served:	12733
Contact:	JETT, EUGENE	Contact address:	PO BOX 327
Contact address:	FLEMINGSBURG	Contact city:	KY
Contact state:	41	Contact zip:	606-845-39
Contact telephone:	Not Reported		
PWS ID:	KY0350133	Activity status:	Active
Date system activated:	7501	Date system deactivated:	Not Reported
Retail population:	00005963	System name:	FLEMING CO WATER ASSOCIATION
System address:	EUGENE JETT	System address:	P O BOX 327
System city:	FLEMINGSBURG	System state:	KY
System zip:	410410000		
County FIPS:	035	City served:	FLEMINGSBURG
Population served:	5,001 - 10,000 Persons	Treatment:	Treated
Latitude:	382532	Longitude:	0835854
Latitude:	380752	Longitude:	0823257
Latitude:	382532	Longitude:	0834551
Violation id:	6305904	Orig code:	S
State:	KY	Violation Year:	2003
Contamination code:	7500	Contamination Name:	Public Notice
Violation code:	76		
Violation name:	PN Violation without NPDWR Violation		
Rule code:	410	Rule name:	PN rule
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	11/17/2003
Cmp edt:	Not Reported		
Violation id:	9571501	Orig code:	S

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

State:	KY	Violation Year:	1998
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52		
Violation name:	Follow-up Or Routine LCR Tap M/R		
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/1998
Cmp edt:	Not Reported		
Violation id:	9645910	Orig code:	S
State:	KY	Violation Year:	2010
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	72	Violation name:	CCR Inadequate Reporting
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2010
Cmp edt:	Not Reported		
Violation id:	9645912	Orig code:	S
State:	KY	Violation Year:	2012
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	24		
Violation name:	Monitoring, Routine Minor (TCR)		
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2012
Cmp edt:	10/31/2012		
Violation id:	9645913	Orig code:	S
State:	KY	Violation Year:	2013
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	72	Violation name:	CCR Inadequate Reporting
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2013
Cmp edt:	Not Reported		
Violation ID:	6305904	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	11/20/2003
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	6305904	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	12/05/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	6305904	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	12/05/2003
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9571501	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	05/09/2001
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	9571501	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	07/24/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9571501	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	05/09/2001
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9571501	Orig Code:	S

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Enforcemnt FY:	2001	Enforcement Action:	05/24/2001
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9645910	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	08/04/2011
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9645910	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	07/20/2010
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9645912	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	12/12/2012
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9645912	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	12/12/2012
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	9645912	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	03/27/2013
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9645913	Orig Code:	S
Enforcemnt FY:	2014	Enforcement Action:	10/16/2013
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	6305904	Contaminant:	7500
Violation type:	76	Compliance start date:	11/17/2003 0:00:00
Compliance end date:	12/5/2003 0:00:00	Enforcement date:	11/20/2003 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	6305904	Contaminant:	7500
Violation type:	76	Compliance start date:	11/17/2003 0:00:00
Compliance end date:	12/5/2003 0:00:00	Enforcement date:	12/5/2003 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	Not Reported		
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	6305904	Contaminant:	7500
Violation type:	76	Compliance start date:	11/17/2003 0:00:00
Compliance end date:	12/5/2003 0:00:00	Enforcement date:	12/5/2003 0:00:00
Enforcement action:	State Compliance Achieved	Violation measurement:	Not Reported
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	9571501	Contaminant:	LEAD & COPPER RULE
Violation type:	Follow-up and Routine Tap Sampling		
Compliance start date:	1/1/1998 0:00:00	Compliance end date:	7/24/2001 0:00:00
Enforcement date:	5/24/2001 0:00:00	Enforcement action:	State Public Notif Received
Violation measurement:	Not Reported		
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	9571501	Contaminant:	LEAD & COPPER RULE
Violation type:	Follow-up and Routine Tap Sampling		
Compliance start date:	1/1/1998 0:00:00	Compliance end date:	7/24/2001 0:00:00

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Enforcement date:	5/9/2001 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	9571501	Contaminant:	LEAD & COPPER RULE
Violation type:	Follow-up and Routine Tap Sampling		
Compliance start date:	1/1/1998 0:00:00	Compliance end date:	7/24/2001 0:00:00
Enforcement date:	5/9/2001 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		
PWS name:	FLEMING CO WATER ASSOCIATION		
Population served:	12733	PWS type code:	C
Violation ID:	9571501	Contaminant:	LEAD & COPPER RULE
Violation type:	Follow-up and Routine Tap Sampling		
Compliance start date:	1/1/1998 0:00:00	Compliance end date:	7/24/2001 0:00:00
Enforcement date:	7/24/2001 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

Map ID:	3		
Epa region:	04	State:	KY
Pwsid:	KY0350134	Pwsname:	FLEMINGSBURG UTILITY SYSTEM
Cityserved:	Not Reported	Stateserved:	KY
Zipserved:	Not Reported	Fipscounty:	21069
Status:	Active	Retpopsrvd:	4604
Pwssvconn:	1550	Psource longname:	Surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	DUNAWAY, JOE	Contactorgname:	DUNAWAY, JOE
Contactphone:	606-845-6861	Contactaddress1:	PO BOX 406
Contactaddress2:	Not Reported	Contactcity:	FLEMINGSBURG
Contactstate:	KY	Contactzip:	41041
Pwsactivitycode:	A		
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	coagulation	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	ph adjustment, pre	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	flocculation	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	gaseous chlorination, post		
Factypecode:	TP		
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	filtered	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	other
Trtprocess:	fluoridation	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	iron removal
Trtprocess:	permanganate	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	taste / odor control
Trtprocess:	algae control	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	gaseous chlorination, pre	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	sedimentation	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	softening (hardness removal)
Trtprocess:	lime - soda ash addition	Factypecode:	TP
Pwsid:	KY0350134	Facid:	268
Facname:	FLEMINGSBURG WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	taste / odor control
Trtprocess:	activated carbon, powdered		
Factypecode:	TP		
PWS ID:	KY0350134	PWS name:	FLEMINGSBURG UTILITY SYSTEM
Address:	P O BOX 406	Care of:	GLENN MCVEY
City:	FLEMINGSBURG	State:	KY
Zip:	410410000	Owner:	FLEMINGSBURG UTILITY SYSTEM
Source code:	Surface water	Population:	5115
PWS ID:	KY0350134	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	FLEMINGSBURG UTILITY SYSTEM
PWS type code:	C	Retail population served:	5115
Contact:	DEARING, KENNY	Contact address:	PO BOX 406
Contact address:	FLEMINGSBURG	Contact city:	KY
Contact state:	41	Contact zip:	606-845-68
Contact telephone:	Not Reported		
County:	FLEMING	Source:	Surface water
Treatment Objective:	CORROSION CONTROL	Process:	PH ADJUSTMENT
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	GASEOUS CHLORINATION, POST
Population:	5115		

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

County:	FLEMING	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	GASEOUS CHLORINATION, PRE
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	IRON REMOVAL	Process:	PERMANGANATE
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	COAGULATION
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	FILTRATION, RAPID SAND
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	SEDIMENTATION
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	SOFTENING (HARDNESS REMOVAL)	Population:	5115
Process:	LIME - SODA ASH ADDITION		
County:	FLEMING	Source:	Surface water
Treatment Objective:	TASTE / ODOR CONTROL	Process:	ACTIVATED CARBON, GRANULAR
Population:	5115		
County:	FLEMING	Source:	Surface water
Treatment Objective:	TASTE / ODOR CONTROL	Process:	ALGAE CONTROL
Population:	5115		
PWS ID:	KY0350134	Activity status:	Active
Date system activated:	7301	Date system deactivated:	Not Reported
Retail population:	00005092	System name:	FLEMINGSBURG UTILITY SYSTEM
System address:	GLENN MCVEY	System address:	P O BOX 126
System city:	FLEMINGSBURG	System state:	KY
System zip:	410410000		
County FIPS:	035	City served:	FLEMINGSBURG
Population served:	5,001 - 10,000 Persons	Treatment:	Treated
Latitude:	382522	Longitude:	0834508
State:	KY	Latitude degrees:	38
Latitude minutes:	25	Latitude seconds:	22.0000
Longitude degrees:	83	Longitude minutes:	45
Longitude seconds:	8.0000		
Violation id:	9645805	Orig code:	S
State:	KY	Violation Year:	2002
Contamination code:	2044	Contamination Name:	Aldicarb sulfone
Violation code:	01	Violation name:	MCL, Single Sample
Rule code:	320	Rule name:	SOC
Violation measur:	0.00587	Unit of measure:	MG/L
State mcl:	0.002	Cmp bdt:	01/01/2002
Cmp edt:	12/31/2004		
Violation id:	9646005	Orig code:	S
State:	KY	Violation Year:	2005
Contamination code:	2456	Contamination Name:	Total Haloacetic Acids (HAA5)

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Violation code:	02	Violation name:	MCL, Average
Rule code:	210	Rule name:	St1 DBP
Violation measur:	0.062	Unit of measure:	MG/L
State mcl:	0.06	Cmp bdt:	01/01/2005
Cmp edt:	03/31/2005		
Violation id:	9646530	Orig code:	S
State:	KY	Violation Year:	2012
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	22	Violation name:	MCL, Monthly (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2012
Cmp edt:	07/31/2012		
Violation id:	9646531	Orig code:	S
State:	KY	Violation Year:	2012
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	24		
Violation name:	Monitoring, Routine Minor (TCR)		
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2012
Cmp edt:	10/31/2012		
Violation id:	9646532	Orig code:	S
State:	KY	Violation Year:	2013
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	72	Violation name:	CCR Inadequate Reporting
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2013
Cmp edt:	Not Reported		
Violation id:	9646533	Orig code:	S
State:	KY	Violation Year:	2013
Contamination code:	7500	Contamination Name:	Public Notice
Violation code:	75		
Violation name:	PN Violation for NPDWR Violation		
Rule code:	410	Rule name:	PN rule
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/18/2013
Cmp edt:	Not Reported		
Violation ID:	6663095	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/02/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9645805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	02/24/2005
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	9645805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	02/24/2005
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9645805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	04/26/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9645805	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	10/25/2005

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9646005	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	04/26/2005
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9646005	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	04/26/2005
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	9646005	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	11/14/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9646005	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	10/31/2005
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9646530	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	08/31/2012
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	9646530	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	10/23/2012
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9646530	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	10/31/2012
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9646530	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	08/31/2012
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9646531	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	03/27/2013
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	9646531	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	12/12/2012
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9646531	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	06/19/2013
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	9646531	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	12/12/2012
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	9646532	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	09/24/2013
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	9646533	Orig Code:	S
Enforcemnt FY:	2014	Enforcement Action:	10/18/2013
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9645805	Contaminant:	ALDICARB SULFONE
Violation type:	1	Compliance start date:	1/1/2002 0:00:00

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Compliance end date:	12/31/2004 0:00:00	Enforcement date:	10/25/2005 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	0		
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9645805	Contaminant:	ALDICARB SULFONE
Violation type:	1	Compliance start date:	1/1/2002 0:00:00
Compliance end date:	12/31/2004 0:00:00	Enforcement date:	2/24/2005 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	0
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9645805	Contaminant:	ALDICARB SULFONE
Violation type:	1	Compliance start date:	1/1/2002 0:00:00
Compliance end date:	12/31/2004 0:00:00	Enforcement date:	2/24/2005 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	0		
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9645805	Contaminant:	ALDICARB SULFONE
Violation type:	1	Compliance start date:	1/1/2002 0:00:00
Compliance end date:	12/31/2004 0:00:00	Enforcement date:	4/26/2005 0:00:00
Enforcement action:	State Compliance Achieved	Violation measurement:	0
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9646005	Contaminant:	2456
Violation type:	2	Compliance start date:	1/1/2005 0:00:00
Compliance end date:	3/31/2005 0:00:00	Enforcement date:	10/31/2005 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	0.06		
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9646005	Contaminant:	2456
Violation type:	2	Compliance start date:	1/1/2005 0:00:00
Compliance end date:	3/31/2005 0:00:00	Enforcement date:	11/14/2006 0:00:00
Enforcement action:	State Compliance Achieved	Violation measurement:	0.06
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9646005	Contaminant:	2456
Violation type:	2	Compliance start date:	1/1/2005 0:00:00
Compliance end date:	3/31/2005 0:00:00	Enforcement date:	4/26/2005 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	0.06
PWS name:	FLEMINGSBURG UTILITY SYSTEM		
Population served:	5115	PWS type code:	C
Violation ID:	9646005	Contaminant:	2456
Violation type:	2	Compliance start date:	1/1/2005 0:00:00
Compliance end date:	3/31/2005 0:00:00	Enforcement date:	4/26/2005 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	0.06		

KENTUCKY GOVERNMENT WELL RECORDS SEARCHED

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

Kentucky Water Well Records Database

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Water Wells in Kentucky. Data from the Kentucky Ground Water Data Repository.

Oil and Gas Well Locations

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Oil and gas well locations in the state of Kentucky

STREET AND ADDRESS INFORMATION

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APPENDIX F. LANDOWNER QUESTIONNAIRES

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Susan Dorsey Ramey

Mailing Address: 5664 Elizaville Road, Ewing, Ky 41039

Address/Location
of Property: St. Hwy 559 Conrot Pike, Flemingsburg, Ky 41041

Date: 6-18-20

Phone Number: 606 782 1509

- 1) Approximately how long have you owned the property?
Since 6-27-2008
- 2) What is the historical primary land use?
Milk cows, hay, tobacco & more recently soybeans & corn
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs? No
- 4) Are you aware of any easements or land use restrictions on the property? Cemetery
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
None
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property? No

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property? NO
- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain. NO
- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).
 NO

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Terry R. Vice

Mailing Address: 952 Junction Rd

Address/Location of Property: Ewing Ky 41039

Date: 6-20-20

Phone Number: 606-748-0872

- 1) Approximately how long have you owned the property?
since 1991
- 2) What is the historical primary land use?
Farm Land (Hay)
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
No
- 4) Are you aware of any easements or land use restrictions on the property?
No
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
No
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
No

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?
NO
- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.
NO
- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Samuel J. + Cibara R. Harris
Mailing Address: 118 Fonda Lane Nicholasville Ky 40356
Address/Location of Property: 1485 Condict Pike Fleming County Ky 41041
Date: June 22 2020
Phone Number: 859 576 1212; 859 797 4494

- 1) Approximately how long have you owned the property?
over 50 years
- 2) What is the historical primary land use?
agriculture, livestock production
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
None No.
- 4) Are you aware of any easements or land use restrictions on the property? yes East Kentucky power.
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
None
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
None.

7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?

None

8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.

None

9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

BRUSH. BURNED

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Steven + Karen Brown

Mailing Address: 2971 ELIZAVILLE Rd Ewing Ky 41039

Address/Location
of Property: 2756 ELIZAVILLE Rd Ewing Ky 41039

Date: 6-21-2020

Phone Number: 606-776-7596

- 1) Approximately how long have you owned the property?
15 years
- 2) What is the historical primary land use?
cattle + crops
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
NO
- 4) Are you aware of any easements or land use restrictions on the property?
NO
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
NO
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
NO

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?
NO
- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.
NO
- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

Brush - clearing of trees

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Earline W. Spencer
Mailing Address: Flemingburg, Ky 41041
P.O. Box 53
Address/Location
of Property: 2890 Elizaville Rd.
Date: 6/23/2020
Phone Number: 606-849-2942

69 yrs. 1) Approximately how long have you owned the property?

Farmland 2) What is the historical primary land use?

No 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?

No 4) Are you aware of any easements or land use restrictions on the property?

No 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.

No 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?

- No 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?
- No 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.
- No 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: RANDY & JEANIE BARKER

Mailing Address: 69 LAZY OATS LANE FLEMINGSBURG, KY 40021

Address/Location of Property: _____

Date: 22 JUNE 2020

Phone Number: 606-782-1419

- 1) Approximately how long have you owned the property?
36 YEARS
- 2) What is the historical primary land use?
GRASS & CATTLE
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
YES, LAND ENROLLED IN CRP NOT PART OF LEASE AGREEMENT LAND.
- 4) Are you aware of any easements or land use restrictions on the property?
NO
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
NONE ON THE LAND LEASED TO TENASKA
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
5-250 gal & 1-150 gal - ALL IN BARN YARD - NOT LEASED ABOVE GROUND
NONE KNOWN

7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?

NO

8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.

PROXAL DOUBLE APPLIED BY MISTAKE TO ONE FIELD - SOMETIME IN LATE 1980's

9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

NONE KNOWN

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: TIMOTHY CROPPER

Mailing Address: 1831, CONVICT PIKE
FLEMINGSBURG KY 41041

Address/Location
of Property: 1831, CONVICT PIKE FLEMINGSBURG KY

Date: 6/22/20

Phone Number: 606-748-0807

- 1) Approximately how long have you owned the property?
16 YEARS
- 2) What is the historical primary land use?
FOR HAY
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
NO
- 4) Are you aware of any easements or land use restrictions on the property?
YES CELL TOWER
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
ABOVE GROUND DIESEL TANK 275 GALLONS
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
NO

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?
NO
- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.
NO
- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

None

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Mary + John Vibbert

Mailing Address: 3211 Convict Pike

Address/Location of Property: Flemingsburg, Ky 41041

Date: 6/18/2020

Phone Number: 606-267-6461

- 1) Approximately how long have you owned the property? Personally 30 years, but in my family two hundred + years
- 2) What is the historical primary land use? Hay, pasture for cattle enterprise. ~~At one time~~, raised hemp, tobacco
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs? NO
- 4) Are you aware of any easements or land use restrictions on the property? NO
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank. NO
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property? NO

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property? **NO**
- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain. *No pesticides used in many years, or herbicides. Some lime + nitrate applied.*
- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

There is an old sink hole at front edge of parcel - Had been used in the years of pre-environmental consciousness to ~~eliminate~~ eliminate unburnable material and it was eventually swallowed up. In more recent years had metal removed and only degradable material has been put there - i.e. brush, tree trimmings, etc.

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: William D Brown

Mailing Address: 599 Elizaville Ave Flemingsboro Ky 41041

Address/Location of Property: 2756 Elizaville Rd Fleming Ky 41039

Date: June 23-2020

Phone Number: 606-782-1963

- 1) Approximately how long have you owned the property?
15 years
- 2) What is the historical primary land use?
Agriculture
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
NO
- 4) Are you aware of any easements or land use restrictions on the property?
NO
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
NO
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
NO

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?

NO

- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.

NO

- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

general Brush Pile

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: J. Brian Clark
Mailing Address: 4312 Elizaville Rd Ewing, Ky 41039
Address/Location of Property: 4032 Elizaville Rd Ewing, Ky. 41039
Date: 6-25-20
Phone Number: 606 748-4210

- 1) Approximately how long have you owned the property?
3 yrs.
- 2) What is the historical primary land use?
Farming / Agriculture
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
No
- 4) Are you aware of any easements or land use restrictions on the property?
Fleming - Mason Energy - Electrical Service
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
No
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
No

7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?

No

8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.

No

9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

brush pile/wood scrap

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Jeff / Angie Stephens
Mailing Address: 600 Cowan Rd Ewing, Ky 41039
Address/Location of Property: Property Has no Address
Date: 6-20-20
Phone Number: 606-782-7640 / 606-~~782~~748-2335

- 1) Approximately how long have you owned the property? 8 Years
- 2) What is the historical primary land use?
CATTLE And Alfalfa HAY
- 3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?
NO
- 4) Are you aware of any easements or land use restrictions on the property?
NO
- 5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.
NONE
- 6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?
NO

7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property?

NO

8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain.

NO

9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.).

NONE

LANDOWNER QUESTIONNAIRE
ACCIONA ENERGY USA GLOBAL, LLC
PHASE I – ENVIRONMENTAL SITE ASSESSMENT
FLEMING SOLAR PROJECT
FLEMING COUNTY, KENTUCKY

Landowner Name: Patricia Atherton

Mailing Address: 96 Gardenside Dr. Flemingsburg, Ky 41041

Address/Location of Property: Lakeview Farm

Date: 1-1-20

Phone Number: 606-845-6541

1) Approximately how long have you owned the property?

Family owned

2) What is the historical primary land use?

Farm land

3) Is the property enrolled in the Conservation Reserve Program (CRP), Grassland Reserve Program (GRP), or Wetlands Reserve Program (WRP), or financed by any United States Department of Agriculture (USDA) or other federal loan programs?

no

4) Are you aware of any easements or land use restrictions on the property?

no

5) If there are any aboveground storage tanks with a capacity greater than 55 gallons or underground storage tanks on the property, please provide information on the contents and capacity of each tank.

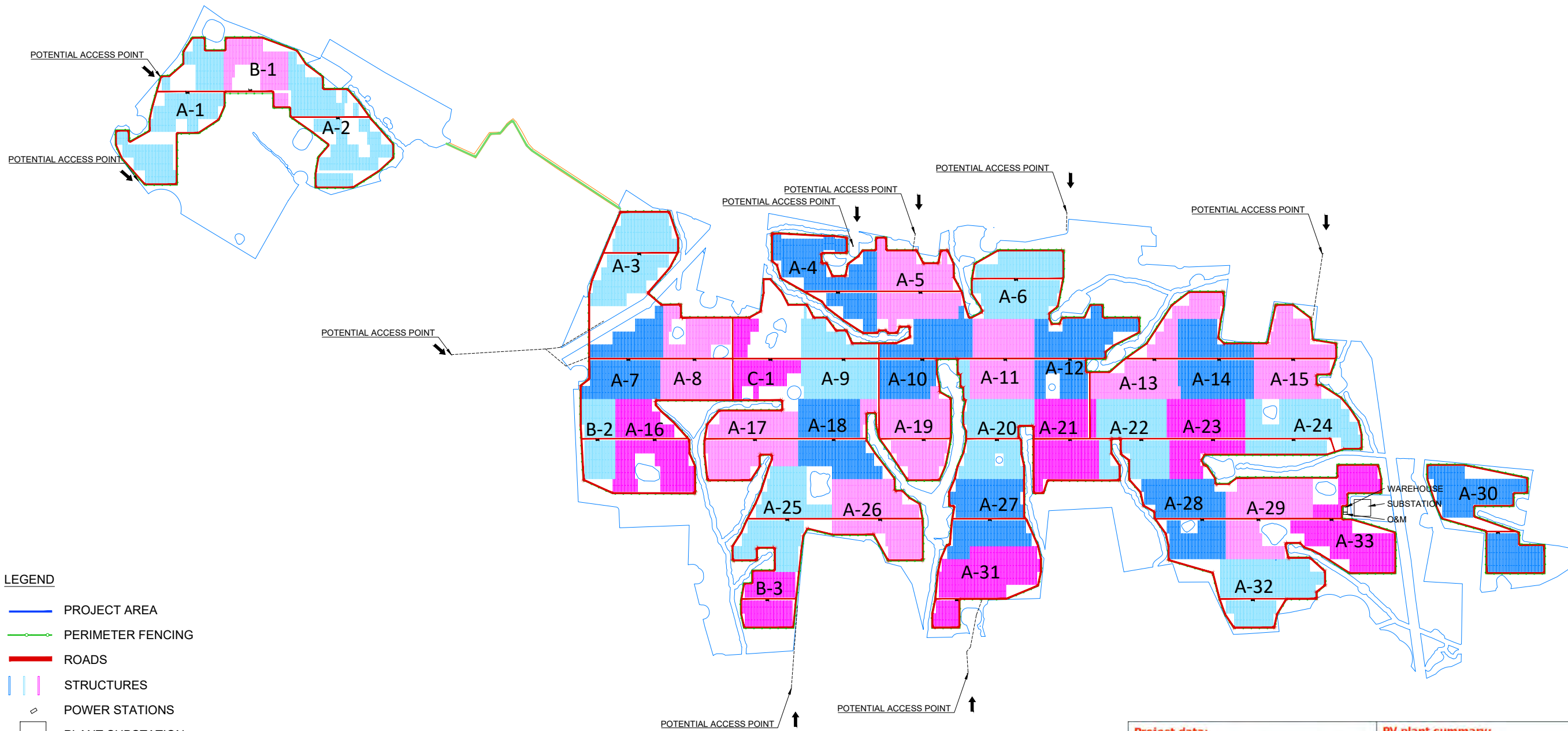
no

6) Do you have any knowledge or have you observed evidence of any spills (chemicals, fertilizer, petroleum, etc.) on the subject or adjoining property?

no

- 7) Have you ever been cited by a regulatory agency for violations pertaining to environmental laws for the subject property? *no*
- 8) To your knowledge have agriculturally related chemicals, fertilizers, pesticides, etc. ever been applied in amounts or concentrations exceeding manufacturers recommended application rates? Please explain. *no*
- 9) Please indicate any areas of solid waste disposal on your property, if any, and explain what types of waste have been disposed there (appliances, brush, farm equipment, household trash, etc.). ~~0~~

APPENDIX E
Preliminary Site Layout



LEGEND

- PROJECT AREA
- PERIMETER FENCING
- ROADS
- ▭ / ▭ STRUCTURES
- POWER STATIONS
- PLANT SUBSTATION
- O&M BUILDING
- WAREHOUSE

Power block type	Block A	Block B	Block C
PV module:	JAM72D20-460/MB	JAM72D20-460/MB	JAM72D20-460/MB
Module power:	460	460	460
Inverter:	iecon Sun 1600TL C	iecon Sun 1600TL C	SG3150U-MV
Nº modules/string:	27	27	27
Nº Inverters:	2	1	1
Nº Strings/inverter:	270	270	270
Nº Strings:	540	270	270
Nº modules:	14580,0	7290,0	7290,0
Peak power (kWp):	6706,8	3353,4	3353,4
Nominal power (kVA):	6252,0	3126,0	3036,0
Ratio Pp/Pn cos φ=1:	1,073	1,073	1,105
Structure number:	135,000	67,500	67,500

Project data:		PV plant summary:	
Project name:	Fleming	Structure type:	HSAT single row
Country:	ited States Of Amer	Module technology:	MonoPERC / Bifacial
COD Date:	Q1 2023	Inverter technology:	Central
Site information:		1/GCR:	3,00
Zone/Datum:		Tilt:	+55
Latitude/UTM-X:	38,429319	Nº Block A:	33
Longitude/UTM-Y:	-83,784701	Nº Block B:	3
Altitude (m.a.s.l.):	300	Nº Block C:	1
Area (ha):		Total structures:	4725,0
Structure		Total modules:	510300
Manufacturer:	Not defined	Total strings:	18900
Nº modules/structure:	108/54	Pmax connection point (kW):	188000,0
Module position:	1P	P inverter nominal (kVA):	218730,0
Structure elevation:	2	Total peak power (kW):	234738,0
PV module size:		Ratio Pp/Pn POI:	1,249
JAM72D20-460/MB	2,148 x 1,06	Ratio Pp/Pinv cos (φ)=1:	1,073

REV.	BASED ON LAYOUT	DATE	PURPOSE	DESCRIPTION
1.4	C02172_P_AE_EN_CST_ERR_990000001	1.4 2020/11/04	FOR INFORMATION	EDITION
1.3	C02172_P_AE_EN_CST_ERR_990000001	1.3 2020/10/27	FOR INFORMATION	EDITION
1.2	C02172_P_AE_EN_CST_ERR_990000001	1.2 2020/09/30	FOR INFORMATION	EDITION
1.1	C02172_P_AE_EN_CST_ERR_990000001	1.1 2020/07/23	FOR INFORMATION	EDITION
1.0	C02172_P_AE_EN_CST_ERR_990000001	1.0 2020/07/17	FOR INFORMATION	INITIAL EDITION



DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED	
WGS84	FLEMING SOLAR	N/A	A.G.B.	N/A	N/A	N/A	
PROJECTION	TITLE						
17N	GENERAL LAYOUT						
SCALE	ACCIONA CODE	EXTERNAL CODE	DRAW.NUMBER	REVISION	SHEET	DATE	PAPER
1/20000	-	N/A	N/A	1.4	01 OF 01	2020/11/04	A3

APPENDIX F

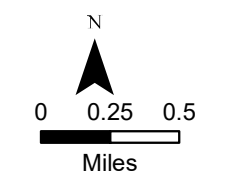
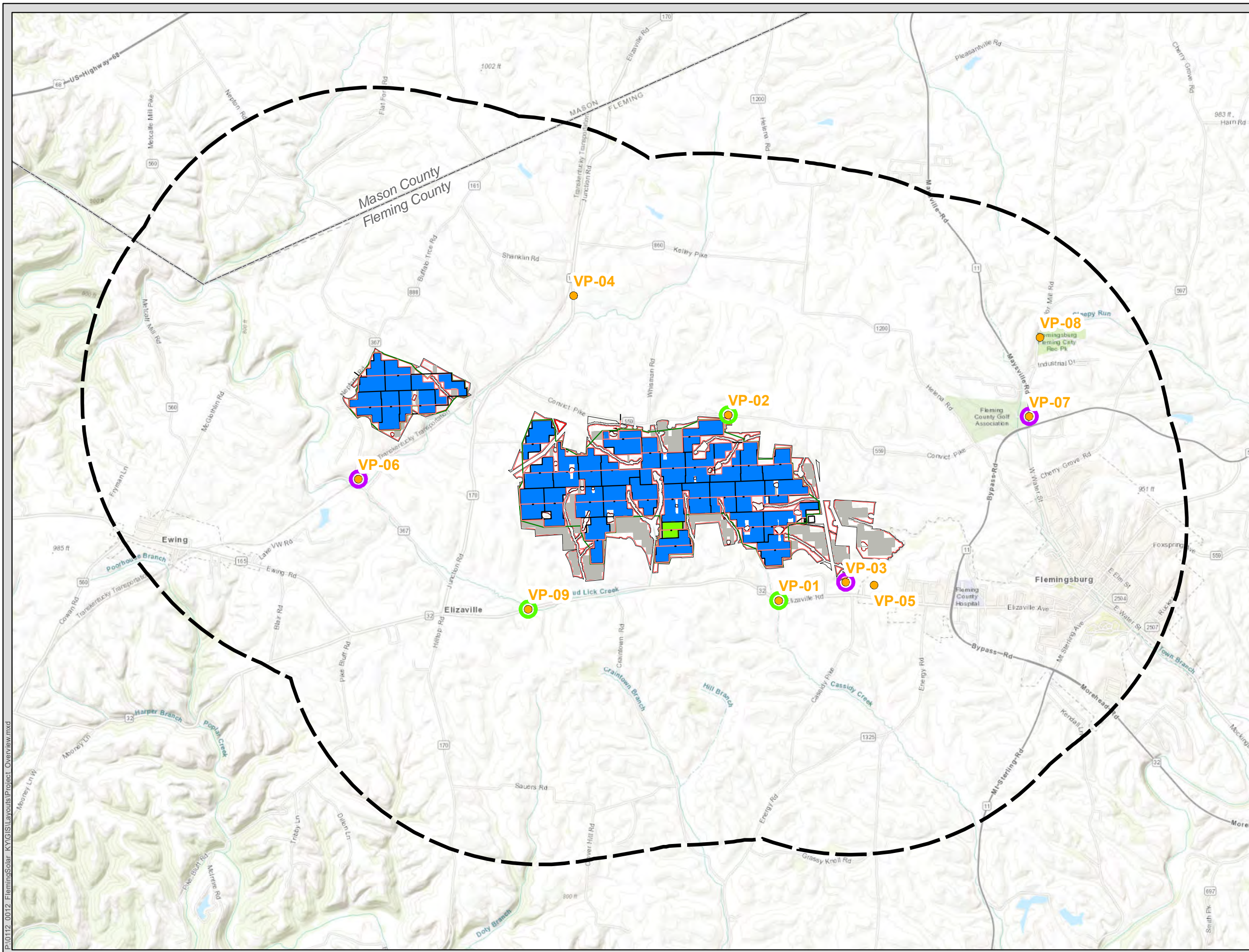
Visual Assessment

Fleming Solar Project

Figure 1 Site Plan & Viewpoints

Fleming County, KY

- Viewpoint Location
- Visual Simulation
- Line of Sight
- 2-mile Study Area



NOT FOR CONSTRUCTION

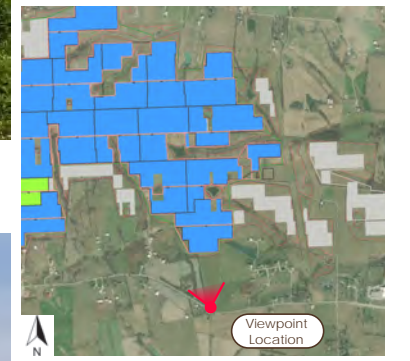


ATTACHMENT A
Visual Simulations

Existing Conditions



*Visual Simulation
1a - Elizaville Road*



Simulated Conditions



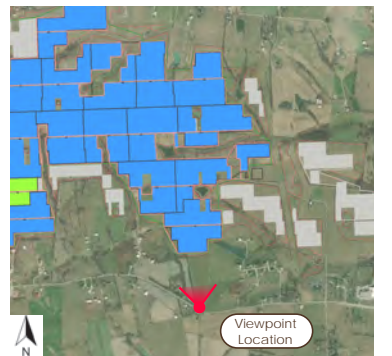
Photograph Information

Time of photograph: 10:45 a.m.
Date of photograph: 6/16/2020
Weather condition: Partly Cloudy
Viewing direction: North
Latitude: 38.420834°
Longitude: -83.778061°
Photo Location: The photo was taken along Hunter's Tree Road approximately 1400 feet south of the Project.

Existing Conditions



Visual Simulation 1b - Elizaville Road



Simulated Conditions



Photograph Information

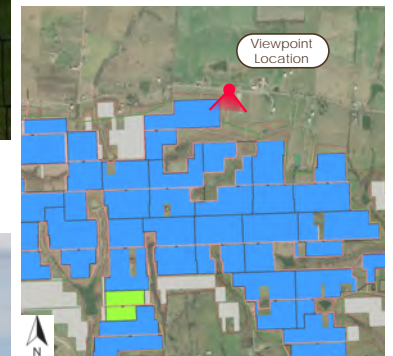
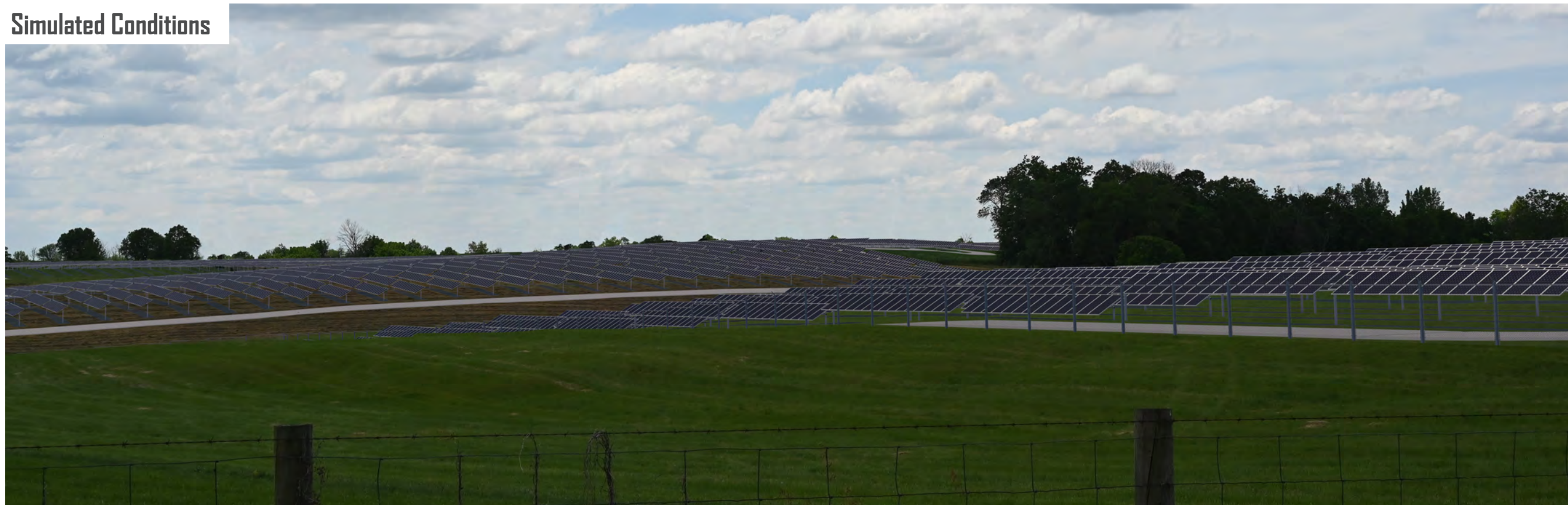
Time of photograph: 10:45 a.m.
Date of photograph: 6/16/2020
Weather condition: Partly Cloudy
Viewing direction: North
Latitude: 38.420834°
Longitude: -83.778061°
Photo Location: The photo was taken along Hunter's Tree Road approximately 1400 feet south of the Project.

Existing Conditions



Visual Simulation 2 - Old Convict Road

Simulated Conditions



Photograph Information

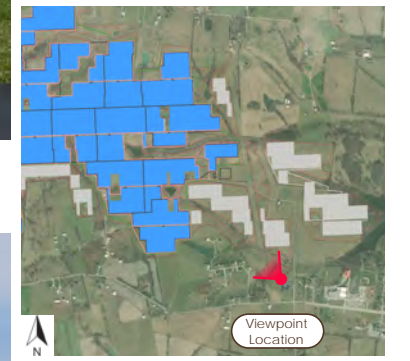
Time of photograph: 12:10 p.m.
Date of photograph: 6/16/2020
Weather condition: Partly Cloudy
Viewing direction: South
Latitude: 38.441537°
Longitude: -83.785114°
Photo Location: The photo was taken along Old Convict Road approximately 250 feet north of the Project.

Existing Conditions



Visual Simulation
3 - Flemingsburg Baptist Church

Simulated Conditions

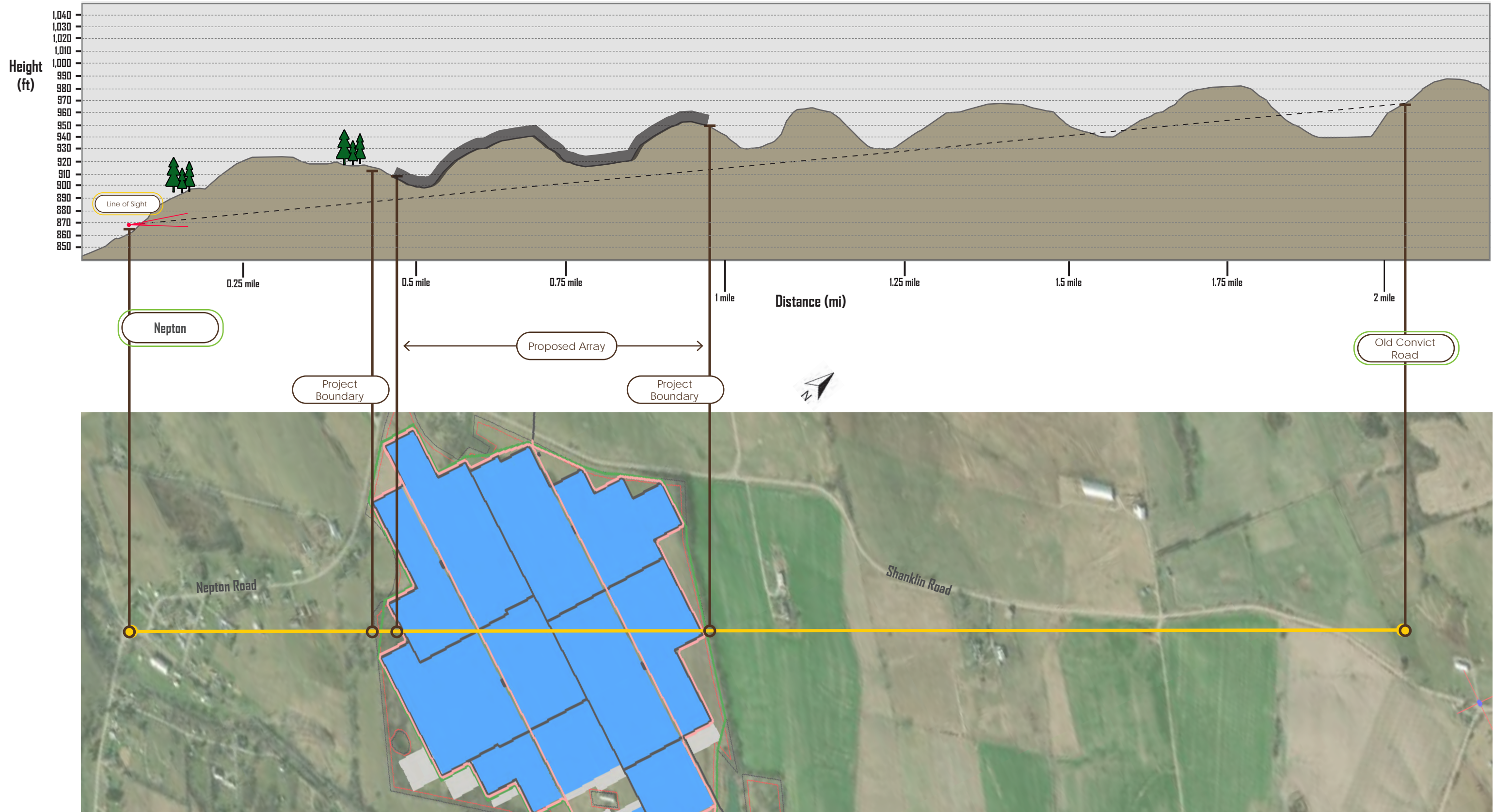


Photograph Information

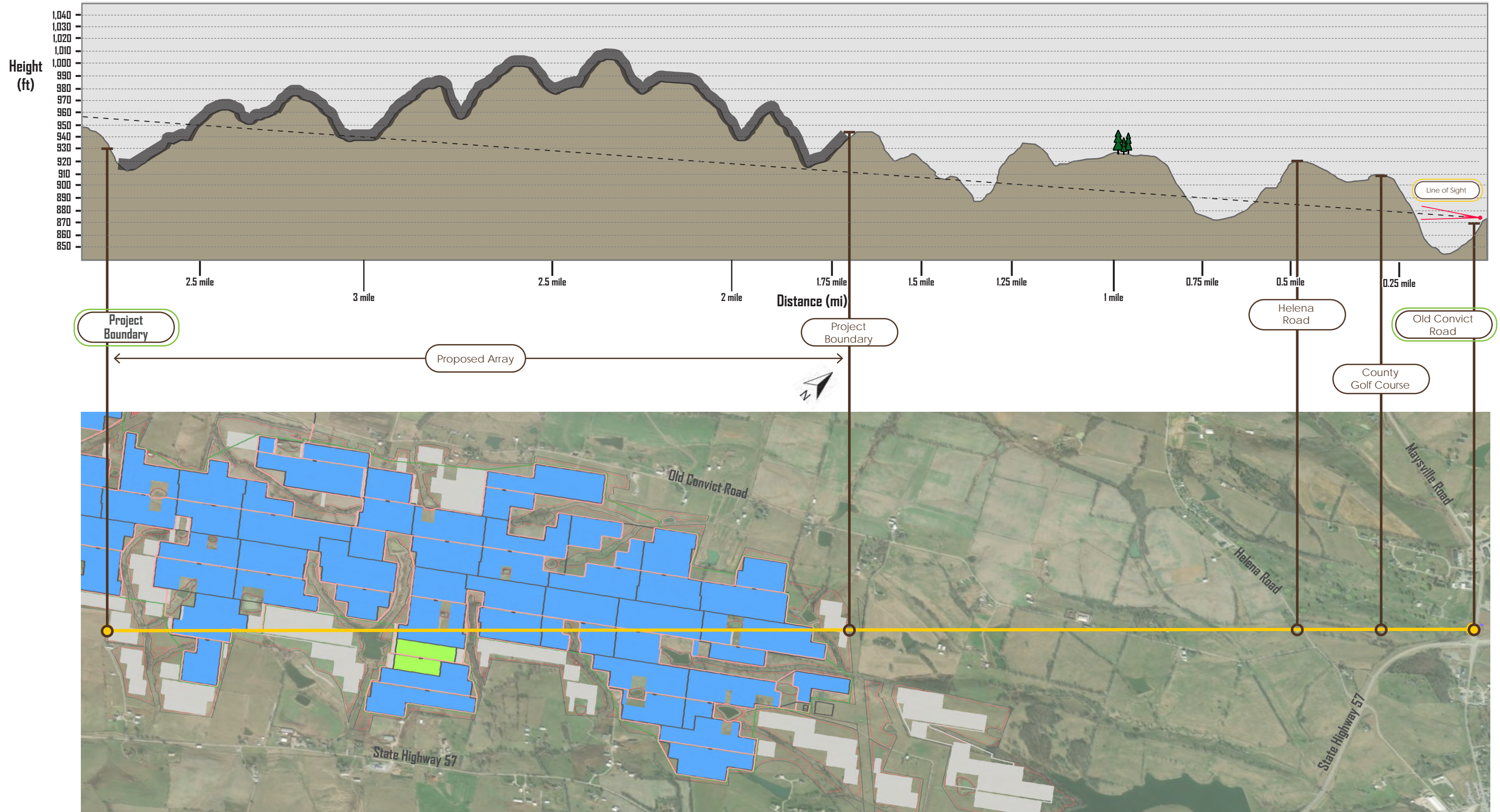
Time of photograph: 10:35 a.m.
Date of photograph: 6/16/2020
Weather condition: Partly Cloudy
Viewing direction: Northwest
Latitude: 38.422815°
Longitude: -83.768600°
Photo Location: The photo was taken from the Flemingsburg Baptist Church parking lot approximately 750 feet south of the Project.

ATTACHMENT B
Line of Sights

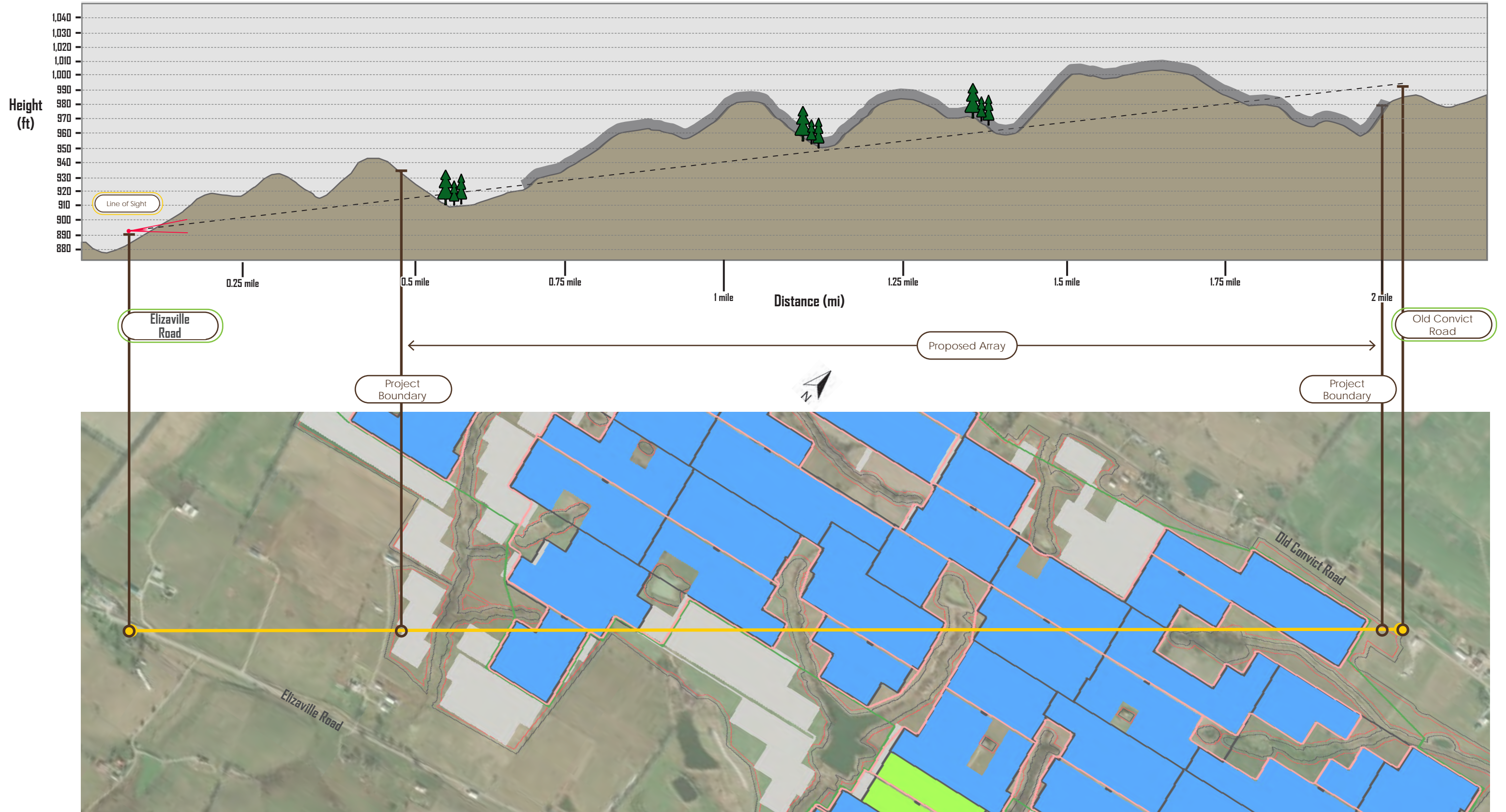
Line of Sight 1: Nepton



Line of Sight 2: Fleming County Golf Association



Line of Sight 3: East of Elizaville



ATTACHMENT C
Photo Log



Viewpoint: 01

Photo Location: Elizaville Road | Approximately 0.5 mile east of Hill Top Road

Date/Time: 06/16/2020 | 10:45am

Viewing Direction: North



Viewpoint: 02

Photo Location: Old Convict Road | Approximately 0.5 mile east of Whisman Road

Date/Time: 06/16/2020 | 12:09pm

Viewing Direction: South



Viewpoint: 03

Photo Location: Flemingsburg Baptist Church | Elizaville Road and Cassidy Pike

Date/Time: 06/16/2020 | 10:32am

Viewing Direction: North



Viewpoint: 04

Photo Location: Flemingsburg Junction | State Highway 161 and State Highway 170

Date/Time: 06/16/2020 | 11:57am

Viewing Direction: South



Viewpoint: 05

Photo Location: Flemingsburg High School | Elizaville Road and Cassidy Pike

Date/Time: 06/16/2020 | 10:05am

Viewing Direction: North



Viewpoint: 06
Photo Location: Nepton | Nepton Road and Hudson Lane
Date/Time: 06/16/2020 | 11:37am
Viewing Direction: Northeast



Viewpoint: 07

Photo Location: Fleming County Golf Association | Marysville Road and State Highway 57

Date/Time: 06/16/2020 | 12:30pm

Viewing Direction: Southwest



Viewpoint: 08

Photo Location: Fleming County Recreational Area | Taylor Mill Road and Marysville Road

Date/Time: 06/16/2020 | 12:42pm

Viewing Direction: Southwest



Viewpoint: 09

Photo Location: East of Elizaville | Elizaville Road | Approximately 0.5 mile east of Hill Top Road

Date/Time: 06/16/2020 | 11:01am

Viewing Direction: Northeast